

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1743.—Vol. XXXIX.

LONDON, SATURDAY, JANUARY 16, 1869.

(WITH SUPPLEMENT) {STAMPED ...SIXPENCE, UNSTAMPED...FIVEPENCE

### MR. JAMES CROFTS, STOCK AND SHAREBROKER, No. 1, FINCH LANE, CORNHILL.

HOLDERS of mining shares difficult of sale in the open market may find purchasers for the same through Mr. CROFTS' agency. Also parties requiring advice how to act in the disposal of abandoned or doubtful mining stocks may profitably avail of Mr. CROFTS' long experience on the market in all cases of doubt or difficulty, legal or otherwise.

In November last, Mr. CROFTS recommended the purchase of NEW WHEAL LOVELL shares. They were then 2s. 6d. They have now advanced to more than double this price, and are 50s., and making regular monthly profits. They will rise probably another 41s. as tin is continually advancing. Mr. CROFTS recommends the purchase of them immediately.

\* Capitalists may hear of an INVESTMENT to pay upwards of 80 per cent. per annum by applying to Mr. CROFTS.

### MR. JOHN BUMPUS, 44, THREADNEEDLE STREET,

has FOR SALE the following shares, free of commission:—  
100 Australian United 50 Gen. Brazilian, 10s 6d 15 So. Darren, 38s. 9d.  
(Gold), 27s. 6d. pd. 10 Great Laxey, £19 1/2 50 Sao Vincente, 33s. 9d.  
28s. 9d. 15 Gt. Retallack, £2 13s 100 Taquaril, 14s. 9d.  
50 Anglo-Brazil, 12s. 3d 20 Kingston Down, 12s 6d 5 Tincroft, £18.  
20 Brynpostig, 33s. 10 Marke Valley, £29 1/2 75 Wheal Ida, 2s.  
50 Chontales, 35s. 6d. 25 New Lovell, £2 1/2 50 W. Prince of Wales, 7s  
100 Carn Camborne, 11s 9 50 No. Treskerby, 24s. 9d 5 W. Rose Down, £15.  
25 Chiverton, £2 1/2 50 Prince of Wales, 24s 6d 50 W. Godolphin, 19s. 6d  
20 Don Pedro, £4 2s. 6d. 3 Providence, £38. 100 Wheal Ida (£1 6s. 6d.  
50 Drake Walls, 16s. 9d. 100 Princess of Wales, 6s. paid), 2s.  
10 East Lovell, £9 1/2 50 Pestarena, 27s. 6d. 20 Wh. Uny, £4 1s. 3d.  
25 E. Grenville, £3 16s 9d 50 Port Phillip (Gold), 15 Wh. Kitty (St. Agnes),  
50 East Carn Brea, 18s 9d 40s. 6d. 50 Wheal Crobar, 7s. 9d.  
5 East Caradon, £10 1/2 35 Royalton, 27s. 6d. 5 West Chiverton, £20.  
100 Frontino, 9s. 6d.

### MR. WILLIAM WARD, STOCK AND SHAREDEALER, No. 29, THREADNEEDLE STREET, LONDON, E.C.

### MESSRS. WILSON, WARD, AND CO., STOCK AND SHAREDEALERS, 16, UNION COURT, OLD BROAD STREET, LONDON, E.C.

### MR. THOMAS SPARGO, STOCK AND SHAREDEALER, 224 & 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

### JOHN RISLEY, (SWORN) STOCK AND SHAREBROKER, 48, THREADNEEDLE STREET, LONDON, E.C.

OFFICE OF THE  
WHEAL MARY FLORENCE MINING COMPANY (LIMITED),  
74, OLD BROAD STREET, LONDON.

### MR. JAMES HUME, STOCK AND SHAREDEALER, 74, OLD BROAD STREET, LONDON, E.C.

Orders in the following shares are requested:—  
Wheal Mary Florence, Drake Walls, 18s. Chiverton, £3 1/2.  
Prince of Wales, 24s. North Treskerby, 25s. Wheal Uny, £2 1/2.  
East Caradon, £9 1/2. Chontales, £1 18s. 9d. East Grenville, £3 1/2.  
South Condurrow, 19s. Taquaril, 7s. 6d. pm. Grenville, 34s.  
Mr. HUME'S "Circular" for January is now ready. Price 6d. free by post.  
Buying and selling orders executed at the closest margins.  
Bankers: The London Joint-Stock Bank.

### MR. J. H. COCK, STOCK AND MINING SHAREDEALER, 74, OLD BROAD STREET, LONDON, E.C.

Fifteen years' experience in Cornwall and London.  
BUYER or SELLER of South Condurrow, North Treskerby, Margaret, Rose-  
wall Hill, Chiverton, and every other description of mining shares, at close  
market prices.

### MR. E. J. BARTLETT, STOCK AND SHAREDEALER, No. 30, GREAT ST. HELEN'S, LONDON, E.C., has SPECIAL BUSINESS in West Godolphin, Summer Hill, North Pool, South Condurrow, Bryn Gwilog, Wheal Agar, Great Vor, South Merilyn, North Treskerby, New Lovell, Great South Chiverton, East Lovell, South Darren, Drake Walls, Wheal Uny, and North Levant.

\* Mr. E. J. BARTLETT recommends the immediate purchase of West Godol-  
phin and South Merilyn shares. BUYER and SELLER of these shares at the  
closest prices.

#### NOTICE OF REMOVAL.

### MR. JOHN MOSS, STOCK AND SHAREDEALER, begs to say that he has REMOVED to— ST. MICHAEL'S CHAMBERS, 42, CORNHILL, E.C.

BUYER and SELLER of all descriptions of British and Foreign Mines at  
close market prices.  
SPECIAL BUSINESS in North Treskerby, Prince of Wales, Caldbeck Fells,  
Frontino, and Chontales.  
Bankers: City Bank, Finch-lane, E.C.

### MESSRS. WARD AND JACKMAN, STOCK AND SHAREDEALERS, No. 1, CUSHION COURT, OLD BROAD STREET, CITY, E.C.

Messrs. WARD and JACKMAN have daily information from the principal seats  
of mining, which is at the service of those who may honour them with their  
confidence.  
Jan. 15. Bankers: London and Westminster, Lothbury.

### MR. C. A. POWELL, STOCK AND SHAREDEALER, No. 1, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.

BUYER or SELLER of shares in all mines currently dealt in, at a margin  
on the market price of the day.  
SPECIAL BUSINESS in Frontino, Taquaril, Don Pedro, Sao Vicente, General  
Brazilian, Chontales, Caldbeck Fells, Prince of Wales, and North Treskerby.  
References exchanged.  
Bankers: City Bank, Finch-lane, E.C.

### MR. WILLIAM SEWARD, STOCK AND MINING SHARE BROKER, 19, THORNGHTON STREET, LONDON, E.C.

Every description of shares BOUGHT and SOLD at the best market prices.

### MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C. (Established 14 years), has FOR SALE the FOLLOWING SHARES, at net prices:—

50 Anglo-Brazil, 10s. 3d.	5 East Lovell, £9 8s 9d.	1 West Chiv., £59 18 9d
50 Brynpostig, 30s.	50 Frontino, 9s. 6d.	50 Taquaril, 6s. 9d. pm.
30 Caldbeck Fells, 11s 6d	20 Gt. Retallack, £2 1/2	1 West Seton, £20.
5 Cwm Darren.	3 Great Vor, £10 8s. 9d.	50 West Godolphin, 21s.
50 Chontales, £1 1/2.	5 Marke Val., £9 13s 6d	50 Wh. Grenville, 80s 9d
20 Chiverton, £2 9s. 6d.	3 North Treskerby, £25	10 Wh. Kitty (St. Agnes), £4 1/2.
5 Cook's Kitchen, £13 1/2	20 No. Treskerby, 25s 6d	3 Wh. Mary Ann, £20 1/2
1 Devon Gt. Con., £310.	50 Port Phillip, £2 1s 3d	1 Wheal Seton, £69 1/2
25 Don Pedro, £23 1/2 pm.	40 Rossa Grande, £3 1/2 pm	1 Wheal Uny, £4 1/2.
10 East Caradon, £10 1/2.	50 So. Condurrow, 17s 9d	10 Wheal Buller, £23 1/2.
20 East Carn Brea, 9s.	5 St John del Rey, £15 1/2	30 Yudanmutana, £2 1/2
50 E. Grenville, £2 11s 3	5 Tincroft, £17 1/2.	

And is a BUYER of 5 Providence, 50 Colquite and Callington, 100 West Godol-  
phin, and 3 Herodfoot at market prices.  
SPECIAL BUSINESS in South Merilyn.

### MR. GEORGE BUDGE, STOCK AND SHAREDEALER, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 20 years), is a SELLER at net prices of:—

100 North Jane, 7s. 4d.	5 East Caradon, £10.	10 Chiverton, £3 8s. 9d.	100 South Merilyn, 11s. 9d.	55 Great South Chiverton, 35s	Wheal Agar, 26s. 9d.	20 Wheal Grenville, 25s.	120 Lovell Console, 100 Ghan Alun, 11s. 9d.	30 Maxlin, 32s. 9d.	45 Colquite and Callington, 60 Carn Camborne, 10s.	15 Nanglies, 70 East Rosewarne, 5s.	100 Pedn-an-drea, 28s. 9d.	3 Wheal Seton, £73 1/2	150 South Grenville, 5s.	80 Royalton, 50 East Beeth, 17s. 6d.	35 Prince of Wales, 24s. 6d.	2 Minera, £190.	10 Maes-y-Safn, £26.	115 Tamar Valley, 30 South Herodfoot, 29s. 9d.	40 Great South Toiglas, 7s.	30 Central Snailbeach, 8s.	150 Princess of Wales, 6s. 6d.	70 East Carn Brea, 100 Taquaril, 14s. 6d.	90 General Brazilian, 100 Anglo-Brazilian.
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SPECIAL BUSINESS in Minera, Colquite and Callington United, West Kitty,  
Caldbeck Fells, Rose and Chiverton United, and Nanglies.

### CORNISH AND FOREIGN MINES— TO SHAREHOLDERS AND OTHERS.

PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—  
SYNOPSIS OF CORNISH AND DEVON MINES," of Friday, Jan. 15, No. 515,  
Vol. XI., price 6d. each copy, forwarded on application, contains information  
on the following mines:—

Great Western.	New Wheal Lovell.	St. Ives Consols.
Chiverton.	East New Lovell.	South Great Work.
Botallack.	Carn Camborne.	West Great Work.
Wheal Trelawny.	East Wheal Seton.	East Pool.
East Wheal Lovell.	Marke Valley.	East Caradon.
West Caradon.	Prosper United.	Chontales.
North Wheal Crofty.	Cook's Kitchen.	Don Pedro.
Great Wheal Vor.	Frank Mills.	Taquaril.
Trumpet Consols.	Wheal Margaret.	

With Particulars of the Recent Advance in the Price of Tin, Table showing  
the Variations in the Copper Standard during the Past Year, Statistics of the  
Metal Markets for Copper and Tin, &c., &c.

### INVESTMENT OR SPECULATION.—A SELECTED LIST OF RAILWAYS, BANKS, MINES, COLONIAL SECURITIES, FOREIGN GOVERNMENT BONDS, &c., forwarded to bona fide investors on application, in addition to the high rate of interest many of the above are paying, there is now every probability of a great rise in market value.

PETER WATSON, STOCK AND SHAREDEALER,  
79, OLD BROAD STREET, LONDON  
(three doors only from Hercules-passage, entrance to the Stock Exchange).  
Twenty-four years' experience.  
(Two in Cornwall and Twenty-two in London.)

Bankers: The Alliance Bank, and the Union Bank of London.  
References given and required (when necessary) in all the principal towns of  
the United Kingdom.

### THE LONDON DAILY RECORD—STOCK AND SHARE LIST—STOCK EXCHANGE SECURITIES. Published every evening at 5 o'clock. It contains the latest prices of railways, banks, mines, foreign stocks and bonds, financial, insurance, and miscellaneous shares, remarks on the daily rise and fall in prices, with advice as to purchase and sales. Annual subscrip- tion, £1 1s.; by post, £2 2s.; monthly subscription—by post, 4s.; single copy, 1d.; by post, 2d.

PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

### MR. EDWARD COOKE, STOCK AND MINING SHAREDEALER, 76, OLD BROAD STREET (and Mining Exchange), LONDON, E.C.

Mr. COOKE, having visited the Chiverton, Caradon, Great Wheal Vor (includ-  
ing West Great Work), Trumpet Consols, and Lovell districts, will feel much  
pleasure in affording information thereon, either personally or by letter.  
References given.  
Price-list sent free on application.  
Bankers: Alliance Bank.

### MR. W. H. CUEL, No. 42, CORNHILL, LONDON, E.C.

SPECIAL BUSINESS—  
West Frances. Pendarves. Emily Henrietta.  
New Lovell. Retallack. North Treskerby.  
Great South Toiglas. Prince of Wales. Chiverton Valley.  
Wheal Chiverton.  
East Caradon.

### MATTHEW GREENE, STOCK AND SHAREDEALER, 1, ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.

EAST CARADON.—I advised the purchase of these shares publicly in my adver-  
tisement of the 24 January at £7 10s.; they have been sold this day at £10 5s.  
SPECIAL BUSINESS both as BUYER or SELLER.

### BARTLETT AND CHAPMAN'S "INVESTMENT CIRCULAR AND FINANCIAL RECORD" (Published on the first Wednesday in each month)

Comprises—A Comprehensive Review of the Stock, Share, and Money Markets;  
an Enumeration and Comparison of the Whole Circle of Investments; and Valua-  
ble Suggestions for Purchase or Sale.  
No. 2, Bucklersbury, London, E.C.  
\* Sent free on application.

### MR. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, E.C.

T. R. has BUSINESS in the following mines, at close market prices:—  
Bedford United. Great Wheal Vor. Prince of Wales.  
Chiverton Moor. Frontino and Bolivia. Tincroft.  
East Caradon. Chiverton. West Chiverton.  
East Grenville. Cook's Kitchen. Wheal Grenville.  
East Carn Brea. East Lovell. Wheal Seton.

T. R. is in a position to recommend several progressive mines that are safe  
for a great rise during the present year. Having had these mines inspected by  
competent agents, and having also inspected them myself, and from my practical  
knowledge of mining in all its branches, I have great confidence in recom-  
mending the mines I have selected for an advance in price. Those who have  
acted upon my advice during the last twelve months have no reason to complain;  
and I never saw a better opportunity offered for making money in mining than  
the present.

Money advanced to any extent on good mining shares.  
Office hours Ten to Four. Bankers: Bank of England.

### MR. G. D. SANDY, STOCK AND SHAREDEALER, No. 48, THREADNEEDLE STREET, LONDON, E.C., has FOR SALE the following shares at net prices:—

10 Chiv. Moor, £5 13s 9d.	20 Marke Valley.	5 Tincroft, £17 1/2.
5 Cook's Kitchen, £13 1/2	5 Mary Ann, £20 1/2.	6 W. Chiv., £58 17s. 6d.
50 Drake Walls.	25 New Lovell, £2 12s.	35 West Great Work.
15 East Caradon.	30 No. Treskerby, £1 1s	20 Brynpostig.
60 E. Carn Brea, 10s. 3d.	3 Providence, £24 1/2.	5 Trelawny, £7 12s. 6d.
15 East Lovell, £9 7s. 6d	20 Rosewall Hill, £1 8s.	50 Chontales, £1 18s.
25 Frank Mills, £3 12s.	50 Royalton.	40 Chiverton, £3 1/2.
10 Great Vor, £10 18s 9d	80 So. Condurrow, 17s 6d	100 Prince of Wales, 22s 9
10 Great Laxey, £19 1/2.	90 Tamar Valley.	

TAMAR VALLEY.—I continue to call special attention to this valuable prop-  
erty. Tributaries are now at work both for silver-lead and fluor-spar. Shares  
must rapidly advance.

### THE MINING INVESTORS' ASSOCIATION.

For the PURPOSE OF COLLECTING and DISSEMINATING TRUTHFUL  
INFORMATION on all MATTERS RELATING to the WORKING as well as  
the FINANCIAL MANAGEMENT of MINES.  
To PURCHASE and SELL MINING STOCK of every description.  
To MAKE ADVANCES, at a moderate rate of interest for short periods, upon  
MINING STOCKS having a market value.

The services of some of the most truthful and experienced inspecting Agents  
have been specially retained for this Association.  
References to bankers and others given.  
THE ASSOCIATION DOES NOT QUOTE SHARES AT FIXED PRICES,  
but they have SPECIAL BUSINESS to transact in the following stocks:—

GOLD MINES.  
Chontales, Pestarena, Don Pedro, General Brazilian.

TIN MINES.  
East Lovell, Great Vor, Providence, and Wheal Kitty (St. Agnes).

COPPER.  
Prince of Wales, Clifford, West Seton, Prosper United, Marke Valley, East  
Caradon, and North Treskerby.

One or two selected mines can be named that will, probably, double their pre-  
sent price within the next six months.  
Address—THE MANAGERS, at the Office of the Association, 26, Nicholas-  
lane, Lombard-street, E.C.

### INVESTMENT, LOAN, AND BANK AGENCY.

Established 1839.  
PUBLIC SECURITIES of every description Bought and Sold upon advan-  
tageous terms. Facilities for payment, and every reliable information afforded  
to investors.

LOANS granted, for one year or any shorter period, on Stocks and Shares  
having a market value.  
Five per cent. interest allowed upon DEPOSITS of all amounts.  
Money and Finance Agency Business generally undertaken.

RICHARD TAYLOR AND COMPANY.  
No. 12, Clement's-lane, Lombard-street, London, E.C.

### MR. T. P. THOMAS, MINING AGENT AND AUCTIONEER, 77, OLD BROAD STREET, LONDON.

Having been lately engaged in the management and inspection of mines and  
collieries, begs to inform his friends and the public that he has now resumed  
his London business, in the exclusive capacity of an agent.

Possessing 26 years' experience of the London Mining Market, with a practical  
knowledge, from personal inspection, of the chief mines in Devon, Cornwall,  
North of England, Wales, and Isle of Man, T. P. THOMAS is in a position to  
give correct information and advice to those who may favour him with their  
commands.

T. P. THOMAS is prepared to execute commissions in the purchase and sale of  
Shares for cash, or the usual fortnightly settlement.

Mines inspected and reported upon at the usual charge. A list of market  
prices on application.

T. P. T. is always prepared to effect sales or purchases in West Godolphin Tin  
Mine, which for investment or speculation for a great rise he can safely advice  
(see report).

### MR. CHARLES THOMAS, MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER, 3, GREAT ST. HELEN'S, LONDON, E.C.

Third Edition, price One Shilling; post-free, fourteen stamps.  
MINING FIELDS OF THE WEST:  
A PRACTICAL EXPOSITION OF THE  
PRINCIPAL MINES AND MINING DISTRICTS OF CORNWALL AND DEVON.  
Published by CHARLES THOMAS,  
At No. 3, Great St. Helen's, London, E.C.

### MR. JOHN GIBBS (late LANE and GIBBS), 2, ROYAL EXCHANGE, LONDON, E.C.

MARK VALLEY, EAST CARADON, WEST ROSE DOWN, and CARN CAMBORN  
MINES.—Although difficult to effect transactions in these mines at times on the  
Mining Market the advertiser is always in a position amongst his corres-  
pondents to buy and sell at close prices, and does not hesitate to recommend a  
purchase in each and all of the above for a great advance in price and large  
dividends.

GREAT LAXEY and SOUTH DARREN. SPECIAL BUSINESS in these mines.  
Bankers: London and County Bank.

### ESTABLISHED SEVENTEEN YEARS. GRANVILLE SHARP AND CO., SHAREDEALERS, 32, POULTRY, LONDON, E.C.

Bankers: London and Westminster Bank, Lothbury, London, E.C.  
RELIABLE INFORMATION GIVEN TO SHAREHOLDERS & INVESTORS.

N.B.—It is quite impossible to "OFFER" a list of SHARES for SALE at  
FIXED PRICES, as market prices vary daily.

SPECIAL BUSINESS in the following Mines at the closest market prices:—  
Chiverton Moor. Great Western Mines. Trumpet Consols.  
Dolcoath. Great Wheal Vor. West Chiverton.  
Devon Great Consols. Herodfoot. West Wheal Seton.

East Wheal Lovell.	Marke Valley.	Wheal Trelawny.
East Trumpet.	Nanglies.	Wheal Uny.
East Caradon.	Providence.	Wheal Seton.
East Pool.	Prince of Wales.	Wheal Bassett.
East Grenville.	North Treskerby.	Wheal Mary Ann.
East Chiverton.	South Condurrow.	Wheal Chiverton.
Great Laxey.	South Caradon.	Wheal Grenville.
Great South Chiverton.	Tincroft.	Wheal Agar.

Stocks and Shares BOUGHT and SOLD at the closest market prices net.  
N.B.—It is quite impossible to quote prices in an advertisement, as they may  
vary daily.

### SHARES WANTED— 20 TRUMPET CONSOLS. 200 EAST CHIVERTON. 2 WEST WHEAL SETON 50 NANGLES. 250 EAST TRUMPET.

Sellers will please state number and lowest price for cash.  
FOR SALE—  
1 East Pool. 1 New Wheal Seton.

### Established Twelve Years.—Twenty-four Years' Experience. MR. F. W. MANSELL, 44, THREADNEEDLE STREET, LONDON, E.C., recommends the IMMEDIATE PURCHASE of the fol- lowing shares:—

East Caradon.	Tamar Valley.	South Condurrow.
Great South Chiverton.	Drake Walls.	Wheal Mary Ann.
EAST CARADONS continue to advance—now buyers at £10 per share, and are sure to go much higher. Special information may be had on application to Mr. F. W. MANSELL.		
TAMAR VALLEY.—No time should be lost in the purchase of these shares. All the promises held out of this mine will be more than fulfilled.		

Bankers: London Joint Stock Bank.

### MR. THOMAS THOMPSON, MINING OFFICES, 12, OLD JEWRY CHAMBERS, LONDON, E.C.

ROYALTON.—The steady increase in the price of tin is causing a great demand  
for shares in legitimate tin mines, and which, there can be little doubt, will be-  
come generally valuable. Investors, however, should be careful how they place  
money in deep and expensive mines, which can only pay profits with tin at high  
prices. They should rather seek an investment in those mines which, with ex-  
tensive reserves, can pay profits with tin at its lowest price. Among the best of  
this latter class I place Royalton, and recommend the purchase of the shares  
wherever they may be met with. At their present price they are intrinsically  
very cheap indeed.

### WEST CORNWALL GRANITE COMPANY (LIMITED). In 1000 shares, of £10 per share (£8 10s. paid).

MR. HENRY MANSELL, 44, THREADNEEDLE STREET,  
LONDON, E.C., has a few SHARES in these PROFITABLE QUARRIES  
to OFFER at 25 per share (£8 10s. paid), at present paying from 10 to 15 per cent.

The quarries are situated in West Cornwall, with shipping ports at Hayle and  
Preston, and are supplying a contract for the New Government Docks at  
Chatham and other works, and large quantities of the stone have been supplied  
for the Thames Embankment. The quality of the granite is equal to any in  
Cornwall, and upwards of 250 tons are shipped monthly, and the quantity can  
be considerably increased.

Samples of the granite, and all particulars, can be had at the above address.  
Mr. H. M. recommends these shares as a sound investment.

### MR. HENRY MANSELL, 44, THREADNEEDLE STREET, LONDON, E.C.

EAST CARADON.—These shares have risen in price since I first advised the  
purchase nearly £7 per share, and will go better; closing price, 10 1/2 to 10 3/4.  
PRINCE OF WALES.—Parties holding these shares should take my advice,  
and sell.

New Lovell, South Condurrow, and Tamar Valleys are safe for a rise shortly.  
Thirteen Years' Experience.  
Bankers: London Joint-Stock Bank.  
References exchanged.

### MR. J. B. REYNOLDS'S "CIRCULAR" can be had POST FREE on application.

J. B. REYNOLDS, Ethelburga House, Bishopsgate-street Within, London, E.C.

### INTENDING INVESTORS.—The "FINANCIAL GAZETTE," published by Mr. Y. CHRISTIAN, should be consulted with a VIEW to the SAFE EMPLOYMENT OF CAPITAL. It contains Original Articles, a Re- view of the Money Markets, and a selection of investments paying 10 to 17 per cent., and such information as is necessary to guide intending investors.

6, Bond-court, Mansion House, London, E.C.  
Bankers: Bank of England.

### INVESTORS IN MINING COMPANIES.— Mr. CHRISTIAN recommends the IMMEDIATE PURCHASE of NORTH LEVANT SHARES, whether bought to hold as an investment or to sell again. It is a splendid property, and dividends are close at hand. Although Mr. CHRISTIAN is the only person publicly recommending the purchase of shares in this sett, he does so with the greatest of confidence, feeling assured that those who buy now will do well.

### CORNISH TIN MINES.— Before investing in ROYALTON, get full information about EAST ROYALTON, from T. A. MUNDY AND CO., 88, BISHOPSGATE STREET WITHIN; or W. HANNAM AND CO., 440, STRAND.

### MR. EDWARD BREWIS, STOCK AND SHAREDEALER, No. 34, OLD BROAD STREET, LONDON, E.C., has BUSINESS, for cash or account, in all the various Mining Securities at best market prices.

Bankers: The Alliance Bank, London, E.C.



## Original Correspondence.

## COAL NEAR LONDON—THE SOUTHERN COAL FIELDS.

SIR,—It is rumoured that the question of the existence of coals beneath the south-eastern counties of England is about to be again revived by an effort being made to get the work undertaken at the expense of the nation, with a view to find some useful employment for the unnecessarily large number of hands at present employed on the Government Geological Survey. Now, without in any way implying that the geological survey is useless, I certainly think that it has prevented a large amount of private enterprise, by leading to the opinion that it is better to wait for information which will some day be obtainable at the national expense, and that it has been a very costly method of obtaining the most meagre results. With respect to the boring for coal in the counties of Kent and Surrey, it is a matter which should be left entirely in private hands, more especially as the very liberal offer was long since made by Messrs. Mather and Platt, of the Salford Ironworks, Manchester (whose names are universally known as manufacturers of the best descriptions of boring machinery), that they would supply all the necessary machinery and apparatus *gratuitously* if others were willing to grant or obtain the ground wherein to make the boring and pay the borers' wages. A proposition was made through the *Mining Journal* to this effect fully three years since, yet it has never been responded to.

Now, does not this arise from the undue importance attached to the Geological Survey and to the School of Mines, and to the restrictive geological notions put forward by those bodies. The geology of the Survey officers is certainly based upon theory which is by no means in accordance with the positive facts which have been ascertained by those who work in the mines, and it is to the want of confidence in the teachings of the Government geologists that the comparative failure of the School of Mines is now due. It is understood that the proposition to use national funds to explore Kent and Surrey for coal, which is referred to as likely to come before the reformed Parliament, will be strenuously opposed in more quarters than one, and that in connection with this opposition effort will be made to secure an entire reform in the administration of the Geological Survey Department and School of Mines, or their abandonment altogether.

The feeling that these bodies were instituted solely to find a suitable appointment for the late Sir H. de la Beche, and that, therefore, proving failures, they might have ceased to exist as soon as he died is largely extending, but it is proposed that if those now in power can only show that the success achieved is progressive there shall be no opposition to giving both the Survey and the School a further trial of (say) a couple of years. With a view to elicit the requisite information, a return will be asked for through the House of Commons, embodying the following particulars:—The names of the officers of the Survey, and of the professors connected with the School of Mines, and the aggregate annual salary paid to each; the amount paid from the commencement to date for the engraving and printing of the maps and books of the Survey, and the amount received from the sale or publication of such documents; the average number of visitors daily to the Geological Museum; the aggregate number of students entered for each class in each session of the School of Mines, and the average number of students attending each lecture, distinguishing the subject of the lecture; the number of students who have attended the entire curriculum, and the number who have received certificates of competency or proficiency. Of course, the answers to these questions will enable some opinion to be formed as to the amount of benefit which has been conferred upon the public by the institutions in question.—*Manchester, Jan. 8.* H. F. J.

## THE LOW PRICE OF METALS.

SIR,—One of the causes of the depression in mining, and low price of metals, particularly that of copper, was the result of the failures of so many eminent firms, owing to the memorable panic of 1866. Another cause was the war breaking out between Spain and Chili, giving for a time a great stimulus to the price of copper, which led to heavy purchases of this article; then followed great caution on the part of consumers, buying only from hand to mouth; large stocks were accumulated, which from bankruptcy and other causes sent down the price of tin and copper to ruinous rates, causing the stoppage of from 100 to 200 mines, which made it unprofitable to carry on operations in any but the richest mines, not only in Great Britain, but abroad as well. Over production for a time sent down prices in the markets of the world.

Everything is given to change, in agriculture as well as in commerce. Tin was selling a few weeks ago at about 43s. or 44s. per ton, but now at 70s., and advancing. Copper is still greatly depressed, though rising in price. Barley was selling some time ago at 30s. per quarter, but now at 53s. to 56s., owing to a scarcity or bad harvest last year, so that it is clear that supply and demand govern prices. The heavy stocks thrown on the market are greatly decreased. The consumption of tin and copper is greatly on the increase, whilst the production must be limited for a time. Many old mines have ceased to be profitable, from the returns as well as the quality being greatly fallen off, and the expense of working also greatly increased; and should heavy stocks not be thrown on the market for a few weeks the result will, and must, be advantageous to holders as well as producers.—*Jan. 12.* A CORNISH MINER.

## MINES AND MINING.

SIR,—In reading Mr. Carpenter's letter in the *Mining Journal* the other day, I observe that he has to contend with the same difficulties which other gentlemen have met with when coming here from abroad for the purpose of endeavouring to induce capitalists to invest in foreign mining property. He has some up-hill work to do, I warrant him, and I lament that it is so. I know for a fact that in many parts of the world there are rich mineral properties lying idle, but which only require a judicious outlay of capital to bring them into a highly profitable condition. It is, unfortunately, true that the majority of those who invest in mines know nothing of mining, and think that dividends must immediately follow the purchase of shares. Of course, my remark does not apply to dividend-paying mines, but to those only which are in progressive development, and to those which, at the earliest state, present prospects and indications of success, requiring capital to perfect that success. Certainly there are many instances in which mining has resulted in immediate profits, on a small outlay, but these are exceptions to the general rule; and unless investors can be brought to regard mining, when legitimately conducted, as a business which requires time to develop all the resources of the individual property, there will always be the greatest difficulty to obtain adequate capital for the working of the most promising mineral-bearing lodes. In the early days of mining in this country (Cornwall) such was not the case, because shareholders then honestly took up a sett with the full intention of providing necessary capital, upon the Cost-book System, for testing the real merits of the undertaking. It is idle to suppose that a good foreign mining property cannot be worked as carefully, and with as much judgment, as any property of the like kind in England. Skilled labour can be obtained easily enough in those departments where required, and as to unskilled labour, a large part of which is required in mining, this, as a general rule, can be more cheaply obtained abroad than at home. There are also the same facilities for selecting duly qualified managers to go out, if they cannot be obtained in the country; but, unfortunately, it often is the case that parties who take up mining properties, for the purpose of forming companies to work them, have, at the outset, come to an understanding with some agent or other that he shall be appointed the managing agent; so that there is often a wheel within a wheel, by which the one plays into the hands of the other, without being detected by the shareholders. The consequence is that it is no unusual thing for a man to be placed in the position of managing agent who is not up to the mark, and who, from want of knowledge as to the practical working of the lodes, forms conclusions, and sends in reports which are not borne out by results; so that in the end, owing to mismanagement in this point particularly, a company comes to grief. Given that there are good mineral lodes in a mining property which hold out every prospect of ores being found therein, so as to make the mine a rich one, notwithstanding the directory may

consist of men of business, honour, and integrity, yet, after all, the success or non-success of the mine must depend on the judgment and knowledge of the agent who has the direction of the mining operations underground. This must necessarily be the case, for if a man be placed in the position of a manager of any concern, mining or otherwise, unless he can have the sole disposal of the mode of working, or if his views are at every point questioned, and perhaps opposed, what can be expected but failure in the results? So that it becomes a question of paramount importance that the men selected to manage the working part of a mining undertaking should possess a full and complete practical knowledge of how the work should be carried out. But how few mining agents are to be found possessing such knowledge, and, when found, see how they are eagerly sought for by those who are interested in mining. It is a very easy thing for a man who is a miner to get himself dubbed "captain." There is no examination necessary for this; consequently, we find men placed as agents in mines who ought never to be there, and whose want of knowledge is often the ruin of the mine and the picking of the shareholders' pockets.

The incident history of many mines is as follows:—Capt. Dicky, Trengown, is informed that a man who lives over to Pentireglass, knows where to find a most promising lead or copper lode on Squire Hobson's land. Capt. Dicky sees this man, gets all the information he can from him; sees Squire Hobson, from whom he gets a licence, and then goes to work to cut the lode, which may be done in a week or in a month. The lode being cut, Capt. Dicky inspects it, and reports upon it. It is a beautiful lead lode, for instance, with gossan, which he thinks is rich in silver; at all events, it is made rich, if not so before. The lode is well defined, lying at a good angle for the production of ore; is, in fact, according to Captain Dicky's opinion, one of the finest lead lodes ever seen so near the surface, and in depth will make a very rich one indeed. But Captain Dicky has no money to go further, so he goes to some one who has, and who is looking out for a promising sett to bring out. He unfolds to him the discovery made; he induces him to take up the grant, making it a condition that Capt. Dicky, whatever his qualifications, shall be appointed captain of the mine. The usual preliminaries being arranged, and having settled what the public shall pay for the privilege of becoming shareholders, Wheel Diddle'em is to be started. Reports from Capt. Dicky and others are got up, into which Devon Consols, South Caradon, and other mines are introduced, to show how small the original outlay will be in this case, and how large the returns must be.

But it is of the utmost importance that a permanent check should be put to this mode of procedure. The duly qualified and respectable mine agents should form themselves into an association for the protection of their own interests, so that they may be able to exclude the would-be mine captains—the land sharks, if I may so call them—and be themselves the only recognised body from which those disposed to invest in mines may be able to select an agent on whom full reliance can be placed for capability and judgment. If there be a necessity (as, doubtless, there is) for a Royal School of Mines, so likewise there is for a Royal School of Miners. The disrepute into which mining has fallen is entirely owing to the dishonesty and incapability of many mine agents, and those connected with them, for the purpose of getting up companies for the purchase and working of any particular sett which may have been secured, for the purpose of making money out of it to start with. False reports are often got up, I am sorry to say, through the agency of unprincipled men, who are paid for doing it, and no one thing in the known world is it so easy to write upon as upon the question of the prospects of mineral lodes. One man being self-interested in the success of a mine, sees quite different from one who is independent of it. The former sees in every inch of the lode "the most promising indications;" it is composed of every necessary ingredient for the production of an immense amount of ore "in depth," "if properly developed." These are saving clauses, which may be attached with impunity to every opinion. If the mine turns out well, the report was a good one, and wisdom is attributed to the writer. If the mine turns out a failure, still the report is untouched, because either the lodes were not worked deep enough for the ore, or were not "properly developed," because, instead of driving thereon east, they should have been driven upon west, together with a hundred other different reasons which dishonesty can invent to account for the non-success of the adventure. It is, therefore, no easy task to induce capitalists to go into a *bona fide* mining property; it is just as easy, in fact, to induce them to invest in one that is *mala fide*. To uphold this want of confidence in good investments, honestly taken in hand, should be the endeavour of everyone connected with that great interest—the mining interest of this country, and, in fact, of the world.

We are now probably on the eve of another speculative epoch, when, from the large accumulations of capital in this country, which the owners thereof cannot find employment for (except at a very low rate of interest), much of it will be invested in new mining undertakings, some honestly and many dishonestly, brought before the public, who, as a general rule, take no trouble whatever to examine well into the merits of a mine they are asked to take shares in before they do so, relying either upon the reports or the interested representations of others, who get their commission on the amount of sales of shares which they can effect. If ever a mining property unproved, or of questionable value, is brought out at a considerable premium, I should be always suspicious as to the *bona fide* nature of the undertaking. Or, if a large number of reserved and paid-up shares are to remain in the hands of the promoters, this would, to me, be another ground for suspicion, for it is not fair in any mining speculation in which the public are invited to join to ask them to pay a premium for that which is not reduced to a certainty as to its value; and no mining property can take this position until the lodes have been developed, and courses of ore therein shown. When this is the case, few such properties are put into the market, simply because, being a proved valuable property, the holders of such are, generally speaking, desirous of holding it themselves, and not offering it to others. Legitimate mining has to contend, also, with a class of men who live by "bulling" and "bearing." How is this to be counteracted? Probably much may be done by keeping the number of shares to a small instead of a large amount, and adopting the Cost-book Principle, which (supposing the shares to be held by investors for the purpose of proving the real value of the property) might be a severe check to the plans of this fraternity. The Limited Liability Principle, and the division of shares into a large number, suit the purposes of these gentlemen, and it is a difficult matter, I must admit, to counteract their operations. An economical management is also another important feature as regards mining. Cash should be paid for all materials, on which, of course, a fair discount would be allowed. The timber and coal merchant often becomes a considerable shareholder in a mine, more for the purpose of supplying timber and coal than any other, at prices beyond what these materials could be purchased for cash; this should not be, nor need be, provided it is seen that there is always in the bankers' hands ready money to carry on the works. Neither should there be a number of paid directors in mining companies, five out of six of whom, as a general rule, know little or nothing of mining. One or two competent men selected by the shareholders, having under them an efficient principal agent, is quite enough, and all that is required for managing the best mine that ever was, or will be, discovered. Such men should be well paid for their services, not altogether by a fixed salary, but also should have a percentage of profits; this would act as a stimulus to their exertions, and would be beneficial to the shareholders at large.

To return to the question of efficient mine agents. How are they best to be obtained? A man simply a theorist in the nature and development of mineral lodes is of no value; but theory and practice must be combined to make a good miner. It is all very well for a man to study the nature and properties of metals, lodes, heaves, slides, strata congenial for minerals, &c., which can be learnt above ground; but to become an efficient miner he must go underground and see his theory in practice; and under no circumstances is it possible to reduce the laws of successful mining to a certainty, because there are so many exceptional occurrences in the nature of lodes, strata, &c., that it is impossible to say beforehand what courses should be adopted; and the question is then one of judgment, in which the best and wisest men may, and often do at times, err. What I should like to see formed would be a mining company with a large capital, not for the purpose of embarking in any one particular mine, but in a selected number—those which will bear the strictest

scrutiny as to future prospects. The old saying, that it is not advisable to put all your eggs in one basket, should be adopted as regards mining; and I consider such a company as this would be much more likely to find profitable employment for their capital when dispersed over more mines than one. The whole should be under one management, as to directors and financial matters, with a good managing agent for each mine. Let a capital of 100,000*l.*, for instance, be paid into their bankers for this purpose, and let five mining properties be carefully selected (this would be allowing 20,000*l.* for the development of each mine), the money being paid in on a deposit account bearing interest; and the management being first-class, both as regards directors and agents, would it not be more satisfactory to the shareholders to feel that there would be no further payment, in all probability, ever required from them; that there would always be ready cash to buy materials at the greatest advantage; and that there would be ample capital paid-up (as 20,000*l.* for each mine would be in nine cases out of ten) for thoroughly opening out their properties also to the greatest advantage? Should there be any other gentlemen with the same views as myself on the matter, I shall be happy to co-operate with them for the formation of such a company. CORNISHENSIS.

## THE AMENDMENT OF THE STANNARY LAWS.

SIR,—I have for some time waited to see particulars of the speeches at Redruth respecting an amendment of the Stannary Laws, and the resolutions passed. The advertisement of the proceedings condemns the affair *in toto*. From where and whom comes the capital to work the mines?—Why, out of the county. Then why confine the advertisement to the Cornish papers once, and the Plymouth papers twice? It looks as if there was an intention to keep the real *bona fide* adventurers, living out of the county, in total ignorance, or the resolution would have had the *Mining Journal* included—the only paper of any real value to adventurers living in London, the North of England, Scotland, Ireland, and many other parts—a paper eagerly sought after as the only reliable source to gain information about Cornish and Devon mines.

To be as charitable as possible, the committee have committed a great blunder at starting, and defeated the ends in view. But who are the committee. I find 30 gentlemen named; out of that number there are *ten lawyers*, and it is reasonable those gentlemen are going to propose and pass such resolutions as will deprive them of their income, for they are one time or another engaged in cases in this very Stannary Court. It appears the defaulting shareholders are not comestable. How is this? Cannot the pursuer file a petition, get a decree, and sell the shares within six weeks? What court is there in which it could be done in less time. It may, perhaps, give those gentlemen (the pursuers) a little extra trouble. How is it these defaulters have increased so greatly lately? Simply finances by the pursuers or committees.

The writer had no less than three demands made by Cornish merchants for supplies to a mine in which he held shares (through the instruction of the pursuer), and one from a Bristol house (all in one week), amounting to above 300*l.*, although not one penny was owing for calls. All had been paid, and receipts given by the pursuer. When the parties suing were shown the receipts, and the pursuer threatened that the mine would be wound-up under the Companies Act of 1862, all the actions were withdrawn. This Act is a great boon and protection to distant shareholders. Perhaps it is not worked so expeditiously as it could be.

If mines winding-up were treated in the same manner as a bankrupt's estate is treated in the Bankruptcy Courts (which, in the opinion of commercial men, it could be), by realising as speedily as possible—say, within six months—and divide the proceeds among the creditors, it would be a greater boon still, and everyone be fully satisfied. Have mines been wound-up more speedily than are left in the hands of the pursuers or committees? I confess I know not one. Where is South Ellen, that stopped in 1860? Has the pursuer called a meeting, or sent a statement to the shareholders of what has been done with the balance, supposed to be 600*l.* or 800*l.*? Not one has been received by the writer (one of the unfortunate). Has South Tolgus and many others been wound-up? Cliljah, after a lapse of three years, has been closed, and a call of 10*l.* per share made to pay the balance. Talk of the Court being slow—the other method is but little better, if any. The pursuers, doubtless, disapprove of the Court, because they cannot any longer have any plunder out of the wreck. When the mines go into the Court, their salary ceases. On the contrary, the salary is charged until the day the books are closed. Well may they wish to keep the mines out of Court, and have the winding-up in their own offices.

One resolution proposed by the committee appears to be damaging to mining enterprises. "The calls to be made in prospectively by a majority of shareholders present;" also the other resolution, "That the adventurers, at any subsequent meeting, shall have power to forfeit all shares absolutely upon which calls shall remain unpaid." If anything upon the face of this earth is unjust, these two resolutions appear most unjust. It is something like saying—We have had your money to open the mine. We have now arrived at a point when good results may be expected. We will now make such a heavy call as will not be responded to. As you have kindly assisted us with your money to open the mine, we now want your shares. We will now get rid of you, and have the mine in our own hands. We expect something good shortly, and you may go and whistle.

This appears the object the foresighting, cunning, and enterprising Cornishmen have in view, but it will not do, Cousin Jacky. John Bull is not to be done this way, let him be ever so tame. Give the outsiders fair play; they will subscribe capital to work the mines; if not, you may work them yourselves. A few years will show the result—say, ten. Your mines will be all sent, and mining in Cornwall be a thing of the past. Then will the rising generation say—Oh? how short-sighted our forefathers were. Instead of our doing as they did, amass princely fortunes by mining, we have to labour and toil for our living, or seek a home in a foreign country.

A WELL-WISHER TO CORNWALL, AND AN ADVENTURER IN HER MINES.

\* Our Correspondent is in error here—the Resolutions were forwarded by the Secretary to the *Mining Journal* for publication, and appeared on Dec. 26, p. 913.

## THE RESOURCES OF COLORADO—No. VII.

SIR,—Larimer County, which adjoins Boulder, and extends to the northern boundary of Colorado, is of varied scenery, and a mixed character. Its western part is exceedingly mountainous, and embraces the steep secluded canons and wooded mountains north of Long's Peak, and reaching to the "Cache la Poudre" and Larame plains. The eastern part consists wholly of undulating prairies, intersected by streams, the principal of which, Cache la Poudre river, is a fine, clear running stream, heading in the high hills of Larame, and mountain steep of the Rocky Mountain range. It waters a fine valley its entire length, and gives full scope to irrigation. Many fine farms are being cultivated and improved in this county; but of the most importance is the wide range of grazing land of the most excellent quality. Mining in Larimer is not developed to any extent. No gold or silver veins of any great value have yet been discovered. No placer diggings have ever been prospected or found within its borders. Iron, gypsum, and limestone abound. The most remarkable place in the county is Camp Collins, beautifully located where the Cache la Poudre issues from the mountains, running into the plains below. This part of Colorado is in its earliest infancy, and offers rare inducements to farmers and stock raisers. With its rich valleys, fine and healthy bracing atmosphere, nothing is wanting but the magical hand of labour to make it equal to any portion of the State in productive capacity.

Weld County forms the north-eastern corner of Colorado, joining Decatur and Nebraska; is 156 miles long east and west, and 70 miles wide south. The surface is a rolling prairie. The Platte river runs the length of the county. The eastern end is a dry and treeless region, clothed with rich grasses adapted to the raising of cattle and sheep in countless numbers. The western end abounds in water, and a large portion is finely farmed, and raises in great profusion hay, grain, and all vegetables; and being a strictly grain and cattle raising country, has no mines, excepting coal and iron. On Dry Creek are beds of coal 14 to 18 ft. thick, and bog iron in immense quantities.

Summit County is the largest in Colorado, and embraces the whole north-western portion. It consists of ranges of mountains, and valleys with streams, being watered by the Yampah, White, Grand, and Green rivers and their tributaries. The most interesting feature is the parks, which are a famous summer resort for excursion parties for hunting and fishing. Large game, such as bear, deer, elk, and antelope abound in the forests, and the streams are filled with the finest speckled trout. The country is well timbered, and the soil excellent. Grass and flowers grow to the top of the highest mountain, where there is any place for the soil to stick on. A great part of this county is as yet a *terra incognita*, except to a few venturesome hunters and trappers, who have explored and penetrated different parts of this most beautiful region. Within its vast scope of prairies, mountains, and forests some of the highest peaks of North America rear their frosty heads, and from their perpetual snows give birth to the head waters of the great Colorado river. The surface is diversified in an extraordinary degree. Situate in mountain valleys, the parks are magical in beauty and picturesque beyond description, teeming with game. Embowered with multitudes of flowers, carpeted with rich clover and most nutritious grasses, and surrounded by forests of oak, poplar, and pine.

The labour of skilled proprietors have shown beyond a doubt that the western slope, and on the head waters of the Snake river, large and well developed runs of argentiferous galena, silver glance, sulphuret, and chloride of silver abound in most fabulous quantities, and promise to make this a second Potosi in argentiferous wealth. Smelting works have been begun, towns laid out, roads opened, and now awaits cheap labour, with supplies and suitable reduction works, with economical management, to astonish the most sanguine by its exhaustless and unlooked for wealth. At present the population is scattered, and few in number; still, the indomitable energy which has kept it up and explored its wild secluded valleys will meet with its remuneration, and attract in time, if not to its mines, at least to its rich farming lands. Beautiful well grassed meadows abounding everywhere in the parks, and in the valleys of the streams that lose themselves in the great Colorado. The speedy completion of the Union Pacific Railroad to the northern boundary of the country will furnish means of ingress and egress that will facilitate the settlement of this extensive, rich, and unoccupied region.

Lake County lies south of Summit, and joins Utah on the west, extending south to the Uncomfadre Mountains; it is 150 miles long, by 110 miles wide. In the eastern part of the county the Arkansas river, flowing eastward, reaches the Atlantic through the Mississippi and Gulf of Mexico. While the Gunnison river, by way of the Grand and Colorado, rolls and tumbles westward to the Gulf of California, and mingles its waters with the Pacific. On the head waters of the Arkansas the first gold discoveries were made, and which in 1860 led to a considerable emigration to this part of the country. Gold was found in "California Gulch" in fabulous quantities, and in some rich claims, rivaling the best ever opened in California itself. The exhaustion of placer mining has led many of the individual miners who have remained to devote themselves to farming.



and agricultural pursuits; and this will ultimately become the main reliance of miners without any capital but their own labour, and it is a reliance they can safely fall back upon, and be sure of meeting with successful results. The western portion of this county will, undoubtedly, be given up to the Indians in the new reservation the U.S. Government is about to form from the corners of Utah, Arizona, New Mexico, and Colorado, and within which the whole predatory and roving bands of Indians, by orders from Washington, will be heretofore strictly confined.

Park County, which joins Lake on the west, and Clear Creek on the south, is noted as being one of the richest of the mining counties. Some exceedingly rich placers were discovered in 1859, and in 1861 and 1862 new discoveries excited great expectations that a rich quartz mining region would be developed. Several quartz mills were erected, towns established and settled, and mining vigorously followed, until to-day hundreds of rich auriferous veins of quartz and sulphure of iron have been opened, still nothing comparatively has been done to fully test the apparent great richness of this portion of the State, which, like other localities, only waits for the approach of the railroad to introduce low freights and cheap labour. This, with a little capital, economical management, and common sense, must make it one day take the highest rank in the production of gold and silver. The county is well watered and timbered, and the streams are full of trout. It embraces within it the country known as the South Park—a most beautiful mountain basin, in which the South Platte river takes its rise. The Park is surrounded by some very high mountains, from whose snowy flanks are poured the head branches of the Platte, Grand, and Arkansas rivers. The county seat, glories in the euphonious name of Buckskin Joe, near the base of Mount Lincoln. Hamilton, Fairplay, Laurette, Monticary, and Jefferson were all towns of some note when the quick and placer mining was at its height, and will be again assuredly restored to their former prosperity, roads being once opened, and the expense and difficulty of transportation cease to be. The Colorado salt works are located in this county, and furnish sufficient salt of a most excellent quality for the whole State, the supply being only limited by the demand.

We here leave the northern section of the State, and will in a future paper travel into the country south of the Divide, and known as Southern Colorado.

#### NOVA SCOTIA GOLD MINES.

SIR,—The unfortunate collapse of the Nova Scotia Land and Amalgamating Company will hardly have created more prejudice against this province than the clap-trap agitation of a few disappointed place-seekers and political fanatics which has been kept up during the past two years; yet there must be still among the readers of the *Mining Journal* a number not indifferent to the progress of the gold mines, which, but for the two circumstances named, would have received more attention from British capitalists. As no facts speak like figures, I submit a statistical review for the twelvemonths ended Sept. 30, 1868, and beginning Oct. 1, 1867; and that because no later official returns are just now available; in fact, Australian mining statistics for the second quarter of 1868 were already in circulation here before the local returns for the last quarter of 1867 had been sent to press. I should preface the subject by stating that the past year has witnessed greater publicity of gold mining affairs than any previous period, and consequently increased interest. The most important publications that have tended to these results were—

1. A report by Dr. T. STERNY HUNT, F.R.S., to Sir W. E. Logan, Director-General of the Geological Survey of Canada, "On the Gold Region of Nova Scotia."
2. "Acadian Geology." Second edition. By DR. DAWSON.
3. "A Guide to the Gold Fields." By A. H. HARRINGTON.
4. "The Nova Scotia Mining Gazette." The latter, from the absence of local encouragement, merely outlined the year, but the other works are obtainable at the *Mining Journal* office, 36, Fleet-street, or of Messrs. Trubner and Co., 60, Paternoster-row. The appointment of Mr. F. N. Gilborne, of 446, West Strand, London, as special mine agent of the colony, will also be the means of improving a knowledge of its mineral resources.

In Canada the interest may be said to have been exaggerated, for about 40 companies have been started, with a nominal capital of 20,000£ each, for winning gold from the stubborn rock. The prices of property accordingly rose, and where areas had been considered dear at 2£, they were not attainable at 50£, or even 100£. This wild fever has now abated. Some of the companies have organised with a view to working; others with a view to selling; and, as the Canadian and United States markets are overstocked, England and the Continent are likely to be laid under tribute in the coming spring. It may be interesting, then, to receive a summary, brief as it is, of the past year's returns, as it will show that, although no great fortunes have been made out of these mines, except by a few promoters of public companies, they really continue to produce, and if exploited as extensively might be made to yield as largely as some of the popular foreign mines. The yield on which royalty had been paid between Jan. 1, 1862, and Sept. 30, 1868, amounted to 134,732 ozs., to which should be added 6000 ozs. as the approximate yield before sworn accounts were rendered of the quantity produced, and to the sum of these two amounts at least 10 per cent. for what has been stolen and not reported. This would give a total of 154,804 ozs., representing in value 619,216£ sterling. The districts are disposed in the order in which they appear in the official tables—

ISAAC'S HARBOUR.—This district is credited with only 533 ozs. 1 dwt. as last year's product, but has yielded since its opening in 1862 a little over 8000 ozs. In 1863 it maintained an average of 3 ozs. 7 dwts. 13 grs. to the ton (British) from the crushing of 500 tons; last year the average from 411 tons (colonial) was 1 oz. 5 dwts. 22 grs.; in other respects, there is a general falling off. Beach washings were practised here in 1861, and abandoned after awhile, but an attempt was made this summer by interested parties to create a new "rush," on account of alluvial gold on the opposite side of the harbour, but the quantity found was inconsiderable, and no more than by judicious search may be obtained all along the whole sea-coast of that part of the province where the quartz rock prevails. The average earning per day at these workings was estimated by one man at 80 cents, by another at 1½£, which is only labourers' wages.

WINE HARBOUR.—This district shows an improvement in the yield of gold on the year preceding, 1867 having given but 764½ ounces, while 1868 produced 1325½ ounces, with an average per ton of 11 dwts. 12 grs. as against 1867, considering that 2245 tons were reduced, and the width of vein stuff. A firm of speculators bought up the greater part of this field in 1867, and re-sold it this year in lots of 40 acres or more to companies that are likely to resume the work of development. The principal mines here are the El Dorado, Eureka, Provincial, Wiscasset, Orient, and Macintosh. One large property as yet unnamed, belonging to parties in New Brunswick and Montreal, is to have a mill, with 50 stamps erected on it, the size and richness of the lode quite justifying, to all appearances, the undertaking. The El Dorado is an American company, and is an example of enterprise by being the first to adopt a steam drilling-machine, which is found to work very satisfactorily. The Orient Company, which in the autumn of 1867 adopted the so-called Nissen battery (patented here in October, 1867), with a loose back and movable copper plates inside the mortar (a contrivance which, it has transpired, had been tried, and abandoned years ago in Colorado), after two breakdowns had to remodel the mill, and revert to the solid back mortars, with plates outside, the jarring of the stamps having shaken the machinery, and the inside plates adulterated the gold to such an extent as to counteract by depreciation in value the supposed increase in quantity.

SHERBROOKE.—So much prospecting has been done here, and so many experimental crushings performed, that the gross returns for the year are naturally less than in 1867. The Palmerston, Wellington, Hayden and Derby, Cumming, New York and Sherbrooke, and Stanley Mines are controlled by Americans; the Meridian, Wentworth, Canada, Crescent, Dominion, Woodbine, and Caledonian by Canadians; and the Metropolitan by Nova Scotians. The latter consists of about two acres of ground, but is managed by a Cornish captain, and has given good dividends for the scale upon which it is worked.

TANGIER is chiefly noted for the right of the Strawberry Hill Mine, part of the property of the unfortunate Nova Scotia Land and Amalgamating Company. The district is divided into two parts—Tangier Harbour and Mooseland. The latter has good mines, but the road to them is bad, and they are, consequently, in a languishing condition.

MONTAGUE has always given a high uniform yield per ton, and although this year shows a falling off of from 1 oz. 19 dwts. to 1 oz. 13 dwts. 11 grs. for an average of 178½ tons, there are prospects of improvement if the new proprietors carry out their programme.

WASLEY is well known to English readers. It has yielded 39,346 ozs. of the 184,732½ ozs. certified to as the gross product of the colony since 1862, and gave the largest bar of gold that the Nova Scotian mines can boast of—namely, one weighing 1200 ozs. Prof. H. Y. Hind, the explorer of the Saskatchewan and New Brunswick, has been engaged on a geological survey of this field, and the results of his researches will, probably, be published.

OLDHAM reached the zenith of its popularity in 1864, but after a period of neglect is again receiving favour. Only two small properties have been worked during the past year, but these two quite successfully.

BREXIDWICK encloses the best planned gold mine in Nova Scotia—the Ophir. During the early part of 1868 the fitting of steam hoisting and pumping machinery interrupted development, but work has been resumed lately with the best results. The Carnarvon and Intercolonial are new properties under exploration, and several small lots are being worked by miners on their own account.

UNTAKE is the most rapidly developed of all the districts, and has been the object of great interest during the year. The preference is quite intelligible from the following statistics:—

Quartz crushed.	Gold yield.	Average per ton.	Average per man.	of men.
1867	1212	947	15	116
1868	2789½	3209	13	123

In February a quantity of 13 tons of ore, from a lode averaging 6 ft. in width, produced 234 ozs. 6 dwts., or 18 ozs. to the ton. This was out of the Westlake Mine, which is now giving an average of less than an ounce. The productive properties are the Untake, Queen, Westlake, Central, Montreal, Union, and North St. Lawrence. Other properties are in the course of development. The Alpha, formerly a productive property, has not been worked much this year, operations having been chiefly confined to prospecting. A tract of 288 acres in the western part of the district, belonging to the Montreal Exploration Company, was systematically explored under the personal supervision of Mr. A. Michel, but the works were abruptly closed on Oct. 1, just as the developments became interesting.

LAWRENCEVILLE is known to your readers as the scene of the early labours of Mr. Thomas Belt, now superintending the Chontales Mines, in Nicaragua, and from two attempts made this year to sell properties located in it to London capitalists. One property, known as the Shanghai, was nearly disposed of, but Capt. Giesse arrived out here at a bad season of the year, when the ground was

covered with snow, and reported adversely; the other has been recently examined by Mr. Robinson, C.E., and the bargain is said to be concluded. Lawrenceville figures in the Commissioner's report with a maximum yield of 24 ozs. 6 dwts. 16 grs. per ton of quartz, but it should be understood that that was the sustained yield of only 1½ tons, the average of 295 tons 7 dwts. being 14 dwts. 20 grs. But the district has hardly had a fair trial, and it is to be hoped that if English capitalists have bought property there it will prove eventually a remunerative investment.

GRAYS.—The small quartz veins of this district are very rich, but works have been carried out here only spasmodically since 1861. An American company have fitted up a smelting-furnace for the application of Stevens' flux. Their preparatory arrangements will cost about 5000£ sterling, so that they must have confidence both in the quartz and the flux. The same individual who attempted to cause a rush to Isaac's Harbour operated here, too, in the spring with the same object, but was detected in time to allay the unhealthy excitement his alleged alluvial discoveries were creating.

UNPROCLAIMED DISTRICTS.—Among the most important of these may be mentioned Echem Secum, Fifteen Mile Stream, and Masquodiboll to the east, and Indian Path and Gold River to the west, but details must be reserved for another letter.—*Halifax, N.S., Jan. 1.*

ACADIBENSIS.

#### THE TAQUARIL GOLD MINING COMPANY.

SIR,—As the great authority upon jacotinga formation mines has pronounced an opinion to the effect that "the Taquaril Mine will prove to be the most profitable of all such mines at present in operation," it may, perhaps, not be altogether without interest to the shareholders to be placed in possession of some reliable data in connection with the previous history of their property.

It would be to no purpose, nor is it my present intention, to invidiously compare this with any other jacotinga mine now working in Brazil; but as so much has been said as to the prospective results likely to be realised by the development of another property, which phenix-like has out of its own ashes become (as far as market price is concerned) the Brazilian star, second only in brightness to the dazzling brilliancy of Maquiné, it is but a due deed of justice to Taquaril, whose advocates have not yet appeared on the platform of laudation, to point out the results it has produced in the face of every imaginable difficulty, indicative of what may be expected when operations are carried under weigh. I at once admit that my interest is identical with the success of Taquaril, although I am bound at the same time to state that I have a stake, but to a smaller extent, in each of the Brazilian mines.

Now, if concurrence of practical testimony is to be accepted as anything at all in favour of a mine, I hesitate not to say that Taquaril can boast of an array excelled by none, if equalled by any. It may not be generally known to the shareholders that the intrinsic merits of their property are attested by the irrefragable evidence of such admitted authorities as Mr. Joel Hitchens—who was the Capt. T. Treloar of his day. To those who were strangers to the fact, it may be mentioned that Mr. Joel Hitchens deservedly occupied for many years the important and responsible position of commissioner of the Imperial Brazilian Gold Mining Association. It is not much less than 40 years since that Mr. Hitchens inspected the Taquaril Mine, and when asked some two or three years afterwards to communicate his opinion, he described it as being very rich indeed, as may be gathered from the fact which Mr. Hitchens instances—that about 3 cubic fathoms of ground extracted from the bottom of the mine at that period yielded about 100 pounds weight of gold. The next authority I will refer to is Capt. Lanyon, the value of whose experience may be best judged from the circumstance that he was employed four years at the St. John del Rey Mines, three at Gongo Soco (now the property of the Rosa Grande Company), and three at Taquaril. Capt. Lanyon, who refers to the property as "the famous Taquaril Mine," says that the new lode (and, according to Mr. Hitchens, there are two known rich lodes running parallel and within 6 ft. of each other) proved to be very rich, hundreds of pounds weight of gold having been taken out from the bottom of the shaft to about 20 fms. above. Capt. Lanyon says—"I have myself taken out over 3 arrobas (an arroba is about 32 lbs.) of gold in so small a space as from 10 to 12 ft. of lode; and whoever may see the bottom of the mine again will find a splendid bunch of gold in each of the lodes going down."

I next come to Capt. Pengilly, who was engaged for 13 years at St. John del Rey, 12 years at the Imperial Brazilian, and 2 years at Taquaril, where, in fact, he is at the present time. Capt. Pengilly says that "the gold-bearing lodes have been proved to be identical with, and in every way similar to, that rich gold mine, Gongo Soco, and is situated but a very short distance from that mine and St. John del Rey;" and he adds that "large quantities of gold will immediately be found in the bottom of the mine, supplied with the lode from the bottom of the mine, will give about 320 lbs. of gold in 24 hours." Captain Williams (one of the managers of the Brazilian Gold Mining Company), Capt. T. Martin (who was 30 years in the Brazil), Capt. S. Bryant, Mr. W. First, and others have confirmed the favourable opinions expressed by the above-cited authorities.

I have quoted these various opinions to prove that I have some ground for my statement—that few mines have such an array of practical testimony in their favour; and also that while the merits of others are being so loudly bruited about—I do not say undeservedly—it is only common fairness that a due quota should be accorded to Taquaril, and that, unquestionably, at least equal to those whose praises are ever and anon "carolled forth in golden lay."

Jan. 14. A SHAREHOLDER IN BRAZILIAN MINES.

#### MINE ACCOUNTS.

SIR,—I observe in the various newspapers suggestions are invited by Mr. Cornish with reference to any alterations in the Stannary Laws that are now in contemplation. Those already submitted by the committee, with the suggestions, may do good, but it is questionable if anything more stringent is not needed, particularly in reference to the accounts as presented at the meeting of the adventurers. The following resolution might, with the unanimous consent of the adventurers both in and out of Cornwall, be added:—"That it is the opinion of the committee that all pursers, secretaries, or committees that shall, knowingly or intentionally, neglect to charge or leave out any bills or costs incurred in any mine up to the end of the month preceding the account meeting shall be deemed guilty of a misdemeanour, and be punishable with imprisonment not exceeding two months. That any pursuer, secretary, or committee who shall, wilfully and intentionally, falsify and fraudulently alter the accounts by crediting tin, copper, or other ores not actually sold, so that the statements do not show a true state of the finances, shall be deemed guilty of a misdemeanour, and be punishable by imprisonment for any period not exceeding two years, with or without hard labour."

If these resolutions are passed and enforced, there will not be much need to have certain resolutions passed against the defaulting shareholders. It is the withholding the true financial position of the mine by the pursuer, secretary, or committee, and the withholding the true position of the mine itself by the agents from the shareholders, that has caused many shareholders to withhold their calls. In too many mines the adventurers are treated as impostors by their paid servants. Remedy this, and let those who spend their money to work the mines be treated with respect, and let them have truthful statements. There will then be but few, if any, defaulters.

AN ADVENTURER OF THIRTY YEARS' EXPERIENCE.

#### OKEL TOR, AND ITS MANAGEMENT.

SIR,—Although I make a point of never answering anonymous letters, still, as in the Notabilia allusion has been made to those lately published in the *Journal* respecting this mine, I feel bound to say a few words on the subject. In the first place, I can hardly understand how anyone professing to be a shareholder could make the misstatements contained in those letters. So far from any dissatisfaction being expressed by the company as to their committee's management, they have, on the contrary, always shown great confidence in the ability with which they have piloted this mine, so far, through one of the most protracted and calamitous periods known in the two counties. The dissatisfaction mentioned rests with your correspondents, and it arises from their having been thwarted in their attempts to reduce the value of the shares, in order to get them into their own hands. When the mine was poor and struggling through great difficulties no notice was taken of it; but now that it has proved its intrinsic value, and that it is capable, with an approaching rise in copper, of making profitable returns, they cry, "Let mine be sold, for it is too late to have a meeting, in order to make a call, so as to induce many of the old shareholders to deliver up their hard-earned shares at our own price;" and this resolve has been taken only after the same parties had failed in depreciating the value of the shares by advertising them frequently at very low prices; and these shares thus advertised were perfectly fictitious, for when applied for they could not be delivered in any instance, and they were never sold to anybody, as no transfers took place.

There are no precedents for these regular meetings mentioned in this mine, to disregard any application for such self-interested parties, who only hold a small number of shares out of 12,388.

At the last meeting we certainly contemplated having a reserved fund ere this time, and we arranged to increase our raisings of copper ore in order to effect that object; but, unfortunately, after the first sampling the prices fell so very low, ultimately reaching the lowest price during the last century, that we were unable to do so. Nevertheless, the mine is in a good sound state, and is in good credit, having paid its way, and being in about the same financial state as at the last meeting; whilst, in the meantime, large and expensive explorations have been made, and much valuable ore ground opened out. The committee never object to all meetings if the majority of the shareholders wish for them, but they do not otherwise see the necessity of bringing a large number of shareholders together until they have some results to inform them of, or important matters to lay before them; nor do they deem it necessary to give publicity to all the efforts they have made to carry out the trust reposed in them. At the same time, they intend calling a meeting in the spring, when they expect to be able to lay a satisfactory statement before the shareholders.

Jan. 14. A. MURRAY.

#### PARK OF MINES CONSOLS.

SIR,—In the *Journal* of Sept. 19 the following report on the above property appeared:—"PARK OF MINES CONSOLS (St. Enoder).—J. Stephens, J. Hooper: The preliminary works of these mines are being pushed on with the greatest vigour. We have cleared up the adit at the 15 for 160 fms., and are now preparing the floors for the trial engine, which will be at once erected. In No. 2 shaft the lode is 3 ft. wide, very rich for tin; and the lode in No. 1 shaft is 9 ft. wide, with good rich work throughout the stone. We have several tons of tin already up for market, waiting for the completion of the necessary machinery to prepare it for market." And in the *Journal* of Oct. 3 the following appeared:—"PARK OF MINES CONSOLS.—J. Stephens, J. Hooper: The mines are looking just as when we last reported. We find on further research that No. 1 lode is worth 30¢ per fm., and we have met with some almost solid stones of tin in the cross-course. We have been proving the halvaas (which are estimated at from 40,000 to 50,000 tons), and have found rich work for tin—in fact, as far as we can at present see they will all pay for stamping."

Now, Sir, I flatly charge the person who made these reports with forgery. I did not sign them, nor had even any information respecting them. My name is not forged to them; but that the majority of facts stated there are not true

I have reason to believe. I hear that a respectable party is about to purchase a large part of this property at a high rate; it is, therefore, necessary that the public should be acquainted with the facts. J. HOOPER.  
Victoria Inn, Roche, St. Austell.

#### IMPORTANT DISCOVERY OF SILVER-LEAD DEPOSITS

AMONGST THE CELEBRATED SLATE HILLS OF FESTINOG, NORTH WALES.

Copy of Report of Capt. John Penrose, late of the Holyford Copper Mining Company, Ireland, and formerly of Cornwall, addressed to Mr. S. J. Hennis:—

Great Manod Silver-Lead Mine, Festinog, North Wales.  
SIR,—Agreeably to your request, I have visited and carefully inspected the above mine, and am pleased to say the peculiarly favourable position of the set as to railway communication for transit of ore and materials can hardly be surpassed, being within one mile of the Festinog Railway, and only about eight miles from a good shipping port, into which the trains run, alongside the vessels. I find this mineral property comprises upwards of 220 acres, and the direction of the principal lodes or mineral veins is east and west, with a prevailing underlie to the north. I also notice cropping out at surface a caunter lode, of great width, and, from the angle of depression, will form a junction with the east and west lodes going into the hill, and at which point a large deposit of mineral may be confidently expected. The surface maintaining the principal valley here is to the south, and the lodes containing the lead ore are on the opposite side, and near the top of the mountain. Before I proceed to describe the mineral prospects of the set, it may not be out of place to refer to the district generally, within the compass of three or four miles, as there is abundant evidence of mineral riches, the chief metals found being lead in bunches or pockets, and being extensive in all the neighbourhood, where workings at intervals for centuries have been carried on. The present workings in your property consist of a shallow adit level, about 18 fms. in length, and driven on the course of the lode, which is from 1 ft. to 18 in. wide; there is also to the south of the lode a branch, about 9 in. big, dipping towards the lode, at a much greater angle, and will fall into it in about 10 fms. deeper. It also appears from the present workings that the ore is widely and abundantly distributed in the lode and branch, each of which is tolerably large in size, and, as I before said, have a tendency to converge downwards, and most probably will make large bunches of ore at no great distance, as there is every indication of its being of large dimensions. The quality of the ore is excellent, and the ground can be cheaply mined. You have this one great advantage to put out a cross-cut, that would drain the lode, and give 100 fms. of dry backs overhead, and 500 fms. in length of ore ground, to be taken away upon tribute. And, further, I have no doubt but that there would be lead ore enough raised by sinking and stopping in the bottom of the shallow adit level to pay one-half the expense of driving the cross-cut, as the lode opened upon appears satisfactorily to stamp the undertaking as one of more than ordinary promise, as a sample of the ore yields by an assay made 65½ per cent. of metallic lead, the strata being chiefly clay-slate and sandstone rocks, and the matrix in which the lead ore is found friable spar and gossans, a most favourable description, and in which most important lead mines have been found. This is no over-sanguine or idle anticipation. It seems to be certain should the undertaking be fairly and properly developed. There is also abundant water-power to work any machinery, and for dressing the ore.

Penryn, North Wales, Jan. 9. JOHN PENROSE.

The quality of this is proved, as on sale it fetches 22£ per ton.

[COPY OF ASSAY.]

[COPY OF ASSAY.]

*Assay Office and Laboratory, 3, Crown Chambers, Threadneedle-street, London,  
Dec. 11, 1868.—Sample, marked "A, No. 3," sent by Mr. S. J. Hennis, contains—*

Gold .....	None.	Sulphur .....	10-10
Silver .....	Traces.	Carbonate of lime .....	5-37
Lead .....	65-62	Silica .....	15-23
Peroxide of tin .....	3-25	Loss .....	0-43

Total ..... 100-00  
This is potter's lead, and is worth 5£ per ton more than ordinary silver-lead.  
W. T. RICKARD, F.C.S.

[We understand that Great Manod Mountain lies at an elevation of about 2000 (two thousand) feet—third next in height to Snowdon, and is the property of Mr. S. J. Hennis, who is a large mineholder in the county of Merioneth, North Wales, and that he contemplates bringing out Great Manod Silver-Lead Mine as a public or private company.—Ed.]

#### CWM DARREN—VALUABLE DISCOVERY.

SIR,—In these dull times of mining any fresh discovery that is being made will be hailed with satisfaction by all whose hearts are really well disposed towards mining; and as your widely-circulated *Journal* will give greater publicity to such discovery than any other channel in the kingdom, it is with great pleasure I have to inform you of the recent discovery of Cwm Darren, where, at a depth of about 25 fathoms from surface, they have cut into one of the richest bunches of ore discovered in Cardiganshire for a very long time. The vein is 9 ft. wide; 12 in. near the centre may be fairly considered to be half solid silver-lead, the other portion being mixed all through with rich strings of ore, varying from 1 in. to 1 in. wide downwards.

The boundary of East Darren and Cwm Darren joins to the east, and this discovery is about 200 fms. to the west of East Darren, which has been, and still continues to be, one of the richest mines in the county. Its other neighbours to the north are Bronffordy; to the south, Cwm Eryn and South Darren; and to the west the Great Darren. No mine in the Principality is better situated, and no one likely to produce better results.

I will, all well, write you in a few days, giving particulars of what is being done in the mines throughout the county.

ABSALOM FRANCIS.

#### WHEAL EMMA AND BROOKWOOD MINES, BUCKFASTLEIGH, DEVONSHIRE.

TO THE SHAREHOLDERS IN WHEAL EMMA AND BROOKWOOD MINES.

GENTLEMEN,—I have received a circular letter from Mr. Walter G. Rogers, solicitor, Exeter, on the subject of "a proposal" to amalgamate Wheal Emma with the adjoining mine (Brookwood). The circular states that "the terms proposed and PROVISIONALLY AGREED TO are—that the two mines shall be united, and a fresh issue be made of 6000 shares, of which 4500 shall be allotted rateably in proportion to their present holdings to the adventurers in Brookwood Mine, and the remaining 1500 to the shareholders in Wheal Emma Mine."

Now, from the wording of this curious circular anyone would suppose that the "terms" and "proposal" mentioned had been made by one company, and "provisionally agreed to" by the other, for there must be at least two parties to such an agreement. Guess my astonishment, then, at discovering that nothing of the sort has taken place as far as the Brookwood Company is concerned. No such proposal has been made to or by them; and no "terms" whatever have been "provisionally" or otherwise "agreed to" by them.

Indeed, one of the largest shareholders in Brookwood informs me that neither the shareholders nor himself even know (officially) that such a course is in contemplation. He further says that he would not amalgamate with Wheal Emma on any terms; nor, speaking also as a Brookwood shareholder, would I. The only chance for these two mines is their being kept perfectly independent of each other, and so under separate management. The absolute control over them ought not, ostensibly or virtually, to vest in one man. Should that misfortune overtake them, both must inevitably perish.

The Brookwood Company, after their long and successful struggle, will naturally look with extreme suspicion on any proposals for amalgamation, from whatever quarter they may proceed. As regards, however, the plausible proposal in question, I believe that should it ever be made to the Brookwood Company the shareholders would unanimously reject it, and never permit their mine to come under the control of the present Wheal Emma Company.

Though the circular affects to care for the interest of the Wheal Emma adventurers, it is covertly dictatorial and coercive in its tone. It appears to have been written under "instructions," as no doubt it was, but from whom those "instructions" emanate we are not informed.

The circular was sent to me as a shareholder in Wheal Emma; and that my co-shareholders may know what one member of that company thinks of the hazardous and unacceptable scheme proposed, I beg to subjoin copy of my reply.

16, Walbrook, London, E.C. J. BERRY.

SIR,—I received your lithograph circular by the post of Monday, Jan. 11, stating you should assume I assented to the arrangement therein proposed, unless you received a notice from me to the contrary within nine days from the date thereof—Jan. 7. Allow me to say that if your circular remained unanswered you would have no right whatever to assume anything of the kind. I have not only not assented to the proposed amalgamation of Wheal Emma with the Brookwood Mine, but I emphatically protest against it, believing that it would be positively injurious to the interests of the Wheal Emma shareholders that the two mines should be united.

I, therefore, decline to name any value to value my proportion of the materials and machinery, as I verily believe the proposed arrangement forms part of a scheme got up for the purpose of bringing, if possible, the management of both mines under the control of one individual.

I am credibly informed, and believe, that the Brookwood Mining Company know nothing whatever of the intention of the Wheal Emma Company to amalgamate with them, and, therefore, as there must necessarily be two parties to the proposed arrangement, it would appear that the "terms" set forth in your circular cannot have been "provisionally agreed to," as therein stated.

Not only every shareholder in Wheal Emma, but also every shareholder in the Brookwood Mine, must individually consent to the proposed amalgamation before it can be legally effected. Your intimation, therefore, that it may be necessary "to stop the (Wheal Emma) mine, and realise the value of the machinery," &c., is at present but an empty threat.

In conclusion, I would just that should any attempt be made to carry the proposed amalgamation into effect without such consent being first obtained, I shall file a bill in the Court of Chancery against the Wheal Emma Company to restrain such amalgamation.

To Walter G. Rogers, Esq., solicitor, 10, Queen-street, Exeter.

[For remainder of Original Correspondence, see to-day's Supplement.]

THE MANUFACTURE OF WATCHES AND CLOCKS.—A most interesting and instructive little work, describing briefly, but with great clearness, the rise and progress of watch and clock making, has just been published by Mr. J. W. Benson, of 25, Old Bond-street, 99, Westbourne-grove, and the City Steam Factory, 58 and 60, Ludgate-hill. The book, which is profusely illustrated, gives a full description of the various kinds of watches and clocks, with their prices, and no one should make a purchase without visiting the above establishments of the United Kingdom, India, or the Colonies, are enabled to select for themselves the watch best adapted for their use, and have it sent to them with perfect safety. Mr. Benson, who holds the appointment to the Prince of Wales, sends this pamphlet to any address on receipt of two postage stamps, and we cannot too strongly recommend it to the notice of the intending purchaser.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending Jan. 10 amounted to 10,501£ 7s. 8d.



## Meetings of Public Companies.

## PESTARENA UNITED GOLD MINING COMPANY.

An extraordinary general meeting of shareholders was held at the City Terminus Hotel, Cannon-street, on Wednesday,—  
Mr. H. J. S. SMITH in the chair.

Mr. J. C. GOODMAN (the secretary) read the notice convening the meeting. The report of the directors (which appeared in last week's Journal) was taken as read.

The CHAIRMAN commenced by expressing his regret that he had been placed in the chair, in consequence of the absence of the chairman of the company, Dr. Quinn, who was suffering from indisposition, and was unable to return from Paris. He, however, endeavoured to do his best to promote a free and full discussion of the important proposal that the board had to submit. The directors had rendered a statement of accounts, in order to make the shareholders acquainted with the actual position of the company at the present time, but the adoption of that, as well as the report of the directors, would have to be deferred to the annual general meeting, which would take place in about three months hence. Although very anxious not to trespass upon their time, he was sure that the present report and statement of accounts could not be placed before them without making some observations upon them. They met under circumstances of great disappointment, for at their last annual meeting they were all very sanguine as to the result that would attend their operations; but the board now met the shareholders to tell them that, whereas last year they had made a small profit of 3412s., they now came before them with accounts for the nine months of the present year—that is, up to the end of September—showing that they had lost more than they had gained in the previous year, the amount being 5670s. But he wished to make one remark about that loss, as it was not so great as it appeared. In the beginning of last year credit was taken for 2600s. worth of ore at 12s. per lb., but for the nine months of the past year credit only had been taken for 660s. worth of ore, so that the adverse balance was partly a loss in money, and partly a diminution in the stock of ore. In the item of 4500s., which appeared in the revenue statement, was less the amount of gold at sea and at the mines; the gold at sea was very properly deducted from the gold received, but the remaining part of that item was for ore at the mines, for which credit had been taken. He felt it to be his duty, as the present occupier of the chair, to try to explain, as well as he could, how it was that this loss had been incurred, and, in fact, what had been the history of the company since the last general meeting. At that meeting the directors led the shareholders to expect, having been led to expect it themselves, favourable returns of gold; therefore, they had watched the gold returns with the greatest attention throughout the whole of the year, and they were not disappointed by the returns which came forward during the first three months, because a greater amount had never been returned from the valley during the winter months; but when they came to the month of May, and they found the returns did not increase, they naturally became very anxious, which was by no means diminished when it was ascertained from the managing director (whom they had since lost) that the yield of gold was turning out very unfavourably. As soon as these facts came to the knowledge of the directors energetic measures were taken, for which they had good reason to be thankful. They telegraphed to Mr. Arthur Dean, whom they knew to be in Italy at the time, requesting him to undertake an examination of the mines, the management, and the reduction processes. He went out himself at the request of the directors, and met Mr. Dean, whom, notwithstanding his other various important engagements, had worked most energetically in the service of the company, while in his report he had taken almost as much pains to place before them the actual position of the company with the present position and prospects of their property. However, Mr. Arthur Dean's reports on their property would speak for themselves. By the time Mr. Dean's report was ready the directors received intelligence of the death of the managing director, when in company with other directors, he (the Chairman), at some personal inconvenience, again proceeded to Italy, in order to make what temporary arrangements might be necessary for the carrying on the business of the company. Fortunately for them, Mr. Dean was still in the neighbourhood, and they at once appointed that gentleman the chief engineer *pro tem.*, the reduction and management of the mines being placed under his immediate supervision. He next came to the question as to the practical reasons why there was this adverse balance against the company. The most important are—that two almost unprecedented floods had taken place, one at the middle, and the other at the end of August; but however disastrous had been the results of those floods, they were by no means the whole cause of the misfortune, because the first of those floods took place in the middle of August, whereas the falling off in the returns took place long before that time. It was impossible to disguise the fact that there had been serious errors in management, although it was but justice to say that accidental circumstances, which no foresight could have averted, had a great deal to do with the loss incurred. Their pumping machinery was very old and defective, which accounted for the continual breakages and hindrances that took place at their best mine—the Peschiera. It was perfectly certain that at no time during the last year had they really been able to work the best part of their best mine, and the consequence was their gold production was diminished. The directors had also to confess that during 1867 the exploratory operations at some of their mines, particularly at Val Topa, had been too much neglected; that their late managing director confessed to him in 1867. The consequence was that the discoveries at Val Topa throughout the whole of the year had been far below what they had had every reason to hope and expect. As to the Canal Mines, it was very certain those mines were very rich, but it was perfectly certain, upon the high authority of Mr. Dean, and other persons of scientific attainments acquainted with the subject, that the gold could not be economically extracted by the wet process, which mainly had been persistently employed. One fault, therefore, of the late management was that this fact was not discovered, and that steps were not taken to treat the ore by another and more satisfactory process. These, then, were the main reasons of the serious loss they had sustained during the greater part of last year, and it was now found that the capital was nearly exhausted. Shareholders could see what the balance was from the statement of accounts. If, after deducting the profit of last year, the loss on revenue account was taken from the balance standing to the credit of capital, the precise amount unexpended would be at once arrived at; and considering their heavy works were still incomplete, and feeling that it would be, if not impossible, at least very difficult, to carry them out to a point where they could obtain a dividend, although a dividend of capital, although he was not prepared to say so large a sum as 20,000s., was absolutely necessary, yet the directors most fully agreed in the opinion that it was best such an amount should be asked for. They proposed to raise it by preference shares, and, of course, the great question for them to determine was what should be asked, because there was a danger if the terms were not sufficiently advantageous that the money would not be forthcoming, whereas if the terms were too liberal they would interfere with the other shares. The directors ventured to think that the terms they proposed were fair and equitable, for the holders of the preference shares would receive a very handsome interest, and the holders of the ordinary shares would not suffer heavily by the effect of the preferential dividend to be paid out of the profits of the company, which the directors conceived would be amply sufficient for that purpose. The directors took to themselves power of paying off the amount borrowed at any time they pleased after five years by the payment of 11. per cent. down. It would not be out of course to mention here that the directors were not really going beyond the capital originally contemplated at the outset of the company, for there were 12,400 reserved shares, which they then supposed, if they should ever require an increase of capital, could be placed at their disposal. They had, however, been advised that the required capital could be obtained upon cheaper terms, by means of preference shares, than by attempting to place the reserve shares at a discount. The proposed plan had had the most careful consideration of the board, and, therefore, they ventured to hope it would meet with the approval and sanction of the shareholders. He concluded by stating that he should be glad to reply to any questions shareholders might put, although in all matters relating to the mines he would refer them to Mr. Arthur Dean, who, he was glad to say, was present to afford the fullest information for the satisfaction, and, he doubted not, the encouragement of the shareholders. (Heard, &c.)

Mr. GOODMAN then read the resolutions, as follows:—

Resolved,—That the following shall henceforth be one of the regulations or articles of the company, and shall be numbered 13A. The company may—  
1. Make arrangements on the issue of shares for a difference between the holders of such shares in the amount of calls to be paid, and in the time of payment of such calls.—2. Accept from any member of the company who assents thereto the whole or a part of the amount remaining unpaid on any share or shares held by him, either in discharge of the amount of a call payable in respect of any other share or shares held by him, or without any call having been made.—3. Pay dividends in proportion to the amount paid up on each share, in cases where a larger amount is paid up on some shares than on others.

Resolved,—That the capital of the company be increased to the extent of 20,400s., by the creation of 8000 shares, to be called preference shares, of the nominal value of 2s. each, and that the following provisions shall apply thereto:—  
1. The holder of such shares shall be entitled, out of the clear net profits of the company, to a preferential dividend at the rate of 12s. 10s. per annum on the amount for the time being paid-up thereon respectively, in preference and in priority to the payment of dividend on the original capital, but shall not, under any circumstances, be entitled to any greater amount of dividend than that before mentioned.—2. In case in any year such clear net profit shall be insufficient to pay such preferential dividend, then the deficiency shall be made good in the first succeeding year in which the clear net profit shall be sufficient to allow of such payment being made.—3. No dividend shall be paid on the original capital so long as any arrears of dividend on the preference shares shall exist.—4. A deposit of 11. per share shall be paid upon, or before, the acceptance of an allotment of the preference shares, and the remaining 2s. per share shall, or may, be called up by the directors at such times and in such manner as they may deem expedient; but no call shall exceed 10s. per share, and an interval of not less than four months shall elapse between two successive calls.—5. If any call shall be in arrears the same shall carry interest at the rate of 12s. 10s. per cent. per annum, or at such greater rate as directors may from time to time prescribe.—6. The company may at any time after the expiration of five years from the date of the first issue of any of the preference shares (all arrears of interest, if any, being first paid) redeem the preference shares on payment of the amount then paid-up thereon, together with a premium of 1s. per share.—7. After the date of the offer to make such redemption such preference capital shall cease to be entitled to the receipt of any further dividend whatsoever, and the holders thereof shall, as such, cease to be members of the company, and the preference shall be deemed to be cancelled.—8. The holder for the time being of any preference shares may, at any time previously to such offer of redemption being made, convert all, or any, of his preference shares (the full amount of 8s. per share having been paid), and the certificates delivered up, to be cancelled, into ordinary shares of the company, upon giving such reasonable notice in writing to the secretary, as the directors may from time to time require, of his desire to convert the same; and thereupon, or as soon thereafter as having regard to the convenience of the company and the time of payment of dividends the directors may direct, the shares named in the notice shall become ordinary shares, and new certificates shall be issued.—9. All shares so converted shall cease to bear their former distinction, and shall nevertheless be numbered in consecutive order, commencing with the number 50,001.—10. Except as herein otherwise especially provided, all the provisions in the Articles of Association of the company shall apply to the preference shares, as if they were ordinary shares.—11. The preference shares shall, in the first instance, be offered to the members, *pro rata*, as nearly as may be in proportion to the number of original shares held by them respectively; any shares which shall not then be taken up by the existing members shall be disposed of by the directors at such times and in such manner as they may from time to time deem expedient.

The CHAIRMAN said the effect of those resolutions was really the best means for carrying out the plan which he thought was expressed quite clearly in one paragraph in the directors' report. He moved that the resolution just read be adopted. Mr. GRIMMAN seconded the proposition.

Mr. BROWN thought the shareholders should hold their hands until it was known whether the gold could or could not be extracted at a profit; and seeing that the wet process was for their class of ore opposed to all scientific experience, it was not too much to say that its persistent continuance adversely reflected upon the scientific skill of their late manager.

Mr. BICKFORD asked whether the uncalculated capital would not be sufficient to carry out the plans recommended by Mr. Dean?—The CHAIRMAN said that the accounts showed that the uncalculated capital had been to some extent anticipated. Mr. ARTHUR DEAN, C.E., said he had the honour of appearing before the shareholders as their engineer-in-chief, having accepted that office at the request of the directors from Jan. 1 inst. From the month of June the mines had been chiefly wrought under his advice, he was, therefore, in a position to lay before them concisely the present state of their properties. A gentleman present had stated his opinion that the mines were being carried on at the present time at a heavy loss; but he (Mr. Dean) would show by the monthly cost-sheets upon the table that such was not the case. In August, September, and October last the mines had suffered considerable surface injury from the effects of the great floods, which had delayed the country to a greater extent than had been known for upwards of a century; this had occasioned a heavy expenditure to repair the damage, and provide the means to prevent the recurrence of similar misfortunes; and, furthermore, the Peschiera Mine, which was the chief source of supply of ore in the Pestarena district, had been under water during the past five months, and its resources had, therefore, been almost entirely lost during that period. Further, he had deemed it advisable to reduce the working operations at the Canal Mines, which, hitherto, had furnished a considerable amount of gold, but, unfortunately, at a loss; and he might add that of 120 miners only seven were now employed there. Thus, the gold return during the past five months had been greatly reduced to what it otherwise would have been. However, by economising cost in various departments, and at the same time pushing out works for new discoveries, they had succeeded, notwithstanding all their misfortunes, in raising, during the past five months, more gold per month, by fair working, than had been obtained in the first seven months of the year, when the resources they were now temporarily deprived of were at command; thus, in the first seven months the average monthly produce of gold had been 505 ozs., and during the last five months it had been 515 ozs. The cost-sheets for October and November showed an expenditure at the mines of 3461s., which included 658s. for ordinary and extraordinary costs, occasioned by the September and October floods. The returns of gold during the same time were 1035 ozs., sold for 3389s.; the mines, therefore, provided for the whole of their costs, with the exception of 72s. out of capital, and but for the floods there would have been a balance the other way. The accounts for December had not yet been received, but he anticipated that they would show a profit. So soon as the damages in the Peschiera Mine could be repaired, and the resources of that mine again brought into play, the gold returns would be considerably augmented. The new discoveries were now yielding 200 ozs. of gold per month. An observation had been made that the working costs at the mines were far too heavy. He entirely agreed with that view, which had been distinctly pointed out in his reports, then in the hands of the meeting, and it was to reduce those costs that he recommended the expenditure of 15,000s., to supply the requisite facilities for the cheaper working of the mines; appliances for the extraction of a larger quantity of gold than is now obtained from the ores; new hauling and pumping machinery; a new shaft at Peschiera; roads and other matters which, in his opinion, would be absolutely necessary to put the mines into a satisfactory state, by which he meant the realisation of handsome profits upon the capital expended. With those more economical means he had no doubt of bringing the mines into a state of permanent profit, believing, as he did, that the mines were intrinsically good; but unless the capital asked for was supplied, he could not undertake the responsibility of promising when dividends could be given. If the mines were not aided by the additional capital, the shareholders would have to wait a long time until, by the accumulation of profits, they were enabled to carry out the works recommended, which were, in his opinion, absolutely necessary. By the application of capital, relief to the heavy expenses, now occasioned by the want of facilities, would be rapidly given, whereas otherwise those expenses would consume a very large part of the proceeds realised from the ores raised. The present reduction processes must be considered as a part only of the work to be done to extract the gold from the ores, and it was most desirable at once to undertake a careful examination of the ores, with a view to save a larger portion of the gold contents. Measures were about to be taken to erect an experimental plant to recover a part of the gold now lost in the waste, an amount greater than the quantity now obtained. Mr. Dean gave explanations upon many points raised by shareholders, and concluded by stating that he expected the mine would realise about 12,000s. profit in 1869, and about 24,000s. for 1870, when the new works and appliances required had been completed and in operation; but it must be perfectly understood that those estimates were based upon the supposition that the proprietors would furnish the capital asked for by the directors.

After some discussion the motion adopting the resolutions was put and carried. Upon the proposition of the Chairman, seconded by Dr. Ramsay, a vote of thanks was passed to Mr. Arthur Dean, for the painstaking manner in which he had investigated the position and prospects of the company's property, and for the elaborate report he had prepared for the guidance of the shareholders.

A vote of thanks to the Chairman and directors terminated the proceedings.

## PENHALE WHEAL VOR MINING COMPANY.

The ordinary quarterly meeting of shareholders was held at the offices, 33, Great Winchester-street, yesterday.

Mr. THOMAS HOLBOYD in the chair.  
The notice convening the meeting was read by the secretary, Mr. W. Battye. The minutes of the last general meeting were read and confirmed. The statement of assets and liabilities showed a debit balance of 1104s. 6s. 8d.

The report of the agent was read, as follows:—

Jan. 12.—The engine-shaft is sinking under the 94 by twelve men, at 17s. per fathom; the shaft is now down 8 fms. 3 ft. below that level, the ground in which it is being sunk is a level of 10s. 6d. per fathom, and the present bottom we have reached is 12s. 6d. per fathom. The ground is becoming more and more favourable, and as indicating that the lodes are also making a change; we generally find the ground change as well as lodes for productiveness. The 94 is driving west of cross-cut, on Parkwarrah lode, by four men, at 7s. per fathom; the lode is 9 in. wide, composed of munde, blende, peach, and disseminated with tin. On a parallel lode in the Old Wheal Vor Mine they met with bunches of tin at the 90; and I think it important that the 94 in our mine should be extended a few fathoms, to prove the lode, as cutting it only would not be giving it a trial. Penhalet's lode is sinking under the 60 by nine men, at 12s. per fathom, now down 5 fms. The lode for this depth has varied from 12 to 15 in. wide, and yields principally munde, with good stones of tin; this is a very kindly lode, and situated as the shaft is, near the "Great Boulder cross-course," which proved so favourable in the adjoining mine, it is my opinion that under such a bed of munde as we have been, and are still, sinking in we shall discover courses of tin. I am daily expecting an improvement, and purpose to continue this shaft to the 75 before I put out. The 60 is driving west of Ritchie's shaft by four men, at 6s. 10s. per fathom; the lode at this point is 12 ft. wide, and is a trial. Penhalet's lode is sinking under the 60 by nine men, at 12s. per fathom, now down 5 fms. 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only a small debit balance, was deemed highly satisfactory, and a call of 1s. 6d. having been proposed it was unanimously agreed to.

## FOREIGN MINING AND METALLURGY.

The aspect of the coal trade in the Liège basin continues good, and a considerable movement of affairs is anticipated in the year upon which we have now entered. Coal for industrial purposes has been principally in demand; coke may also be said to be now as much sought after as it was neglected six months since. In the Charleroi basin the mildness of the season has made itself felt, deliveries being made with rather less freedom on foreign account. Sales for industrial purposes have, however, been well sustained, and contracts expiring with the close of 1868 have been renewed advantageously. In the basin of the Couchant de Mons the movement of affairs is maintained, and sale prices remain very firm. The stocks of fresh coal are now very small, the old accumulations having been run off from day to day. It is stated that the syndicate system, although at an end as regards five great Belgian establishments producing rails, will continue in operation as regards three works, devoting themselves more particularly to the supply of locomotives. The old syndicate, it may be remarked, confined its operations to France, Italy, and Russia. The Charleroi United Collieries Company is now paying 11. per share for the exercise 1868. The Carabinier Colliery Company is paying 21. per share for 1868. The Produits du Flénu Colliery Company is paying 21. per share for 1868.

At Havre, Chilean copper in bars has made 731. 4s. to 731. 12s. per ton; refined ditto, in ingots, 751.; Peruvian mineral, pure standard, 741.; United States (Baltimore), 781. to 801.; ditto Lake Superior, 791. to 841.; Mexican and Plata, in bars, 661.; old yellow copper, 441. to 501.; and red ditto, 661. per ton. At Marseilles, for consumption, Toka has brought 731. Spanish, 741.; refined Chilean and Peruvian, 781.; rolled red copper, for sheathing, 841.; and yellow ditto, 801. per ton. At Paris, Chilean in bars has been quoted at 741.; ditto in ingots, 781.; and Corocoro mineral, 761. per ton. At Rotterdam, Dronthelm has brought 50 fls. to 52 fls. At Havre, Banca tin has been quoted at 881. to 901.; Straits, 861. to 881.; and Peruvian, 821. to 841. per ton. At Marseilles, Banca has brought 1141. 8s., and English in sheets, 1081. per ton. At Paris the quotation for Banca has been 1121. to 1131. Straits, 1121. to 1131.; and English, 1101. to 1121. per ton. At Antwerp, Banca has made 63 fls. to 64 fls. per cwt. At Rotterdam, Banca has made 63 fls. to 64 fls., and Billiton, 65 fls. At Amsterdam, Banca has been quoted at 64 fls. to 65 fls. As regards zinc, it may be noted that at Paris rough Silesian has made 201. 16s.; zinc from other sources, 201. 4s.; and rolled zinc of the Vieille Montagne Company, 281. per ton. At Havre, Silesian zinc has realised 121. 12s. to 221. per ton. At Marseilles zinc, in plates re-cast, has made 181. 8s., and rolled 281. per ton. At Amsterdam, Silesian has brought 13 fls. to 13 1/2 fls.

We have nothing very striking to report in connection with the French iron trade. The temporary admissions of pig-iron and plates free of duty into France, in the first ten months of last year, compared as follows with the corresponding admissions in the same period of 1867:—

	1868.	1867.
Pig .....	39,698 .....	22,042 .....
Iron .....	18,942 .....	22,490 .....
Plates .....	3,068 .....	3,958 .....

The re-exports after payment of duty were as follows in the two periods:—

	1868.	1867.
Pig .....	35,986 .....	22,104 .....
Iron .....	23,554 .....	23,624 .....
Plates .....	4,302 .....	5,453 .....

The quantity of coal and coke imported into France in the first ten months of last year was 3,137,696 tons, as compared with 3,183,868 tons in the corresponding period of 1867. The quantity delivered for consumption was 2,965,546 tons in the first ten months of last year, as compared with 3,045,553 tons in the corresponding period of 1867. The quantity of coal and coke exported from France in the first ten months of last year was 377,833 tons, as compared with 290,366 tons in the corresponding period of 1867. In these totals, French coal figured for 156,684 tons and 137,542 tons respectively. The imports of iron and iron minerals, copper, lead, tin, and zinc into France in the first ten months of last year, compared as follows with the corresponding imports in the corresponding period of 1867:—

	1868.	1867.
Iron and iron minerals .....	448,752 .....	634,682 .....
Copper .....	28,642 .....	20,735 .....
Lead .....	68,594 .....	87,843 .....
Tin .....	8,472 .....	3,199 .....
Zinc .....	38,250 .....	39,522 .....

The quantities delivered for consumption in the first ten months of each of the two years were as follows:—

	1868.	1867.
Iron and iron minerals .....	509,771 .....	528,377 .....
Copper .....	20,019 .....	19,907 .....
Lead .....	40,404 .....	41,624 .....
Tin .....	3,376 .....	3,195 .....
Zinc .....	39,192 .....	39,351 .....

The exports of iron and iron minerals, copper, lead, tin, and zinc from France in the first ten months of last year compared as follows with the corresponding exports in the corresponding period of 1867:—

	1868.	1867.
Iron and iron minerals .....	242,012 .....	182,899 .....
Copper .....	8,624 .....	7,707 .....
Lead .....	11,626 .....	12,711 .....
Tin .....	837 .....	223 .....
Zinc .....	8,574 .....	5,138 .....

In these totals, French zinc figured for the following quantities:—

	1868.	1867.
Iron and iron minerals .....	171,728 .....	134,742 .....
Copper .....	8,291 .....	6,328 .....
Lead .....	3,592 .....	5,544 .....
Tin .....	292 .....	251 .....
Zinc .....	3,427 .....	4,938 .....

These figures are not without interest, but we must not weary the reader with too many statistics.

We learn from an official document that the French rectificative budgets of 1865, 1866, and 1867, placed at the disposal of the French Administration of Mines a sum of 67201. for the publication of geological maps of France. These credits had not been fully absorbed at the close of 1867, and the remaining balance of 20001. was not re-inserted in the budget of the year 1868, to the extent of 20001.

## FOREIGN MINES.

DON PEDRO NORTH DEL REY GOLD.—Per Telegram: Produce for November, 15,344 ozs.; ditto Dec. 17, 7840 ozs.

PESTARENA.—T. Roberts, J. Mitchell, T. Warne, J. Roberts, Jan. 4: We remit this day to the office seven ingots of gold, weighing together 555 ozs. 12 dwts. 1 gr., obtained from the three districts in the month of December from 750 tons of ore. From 28 tons amalgamated at Pestarena we obtained 195 ozs. 10 dwts. 2 grs. From 150 tons of more inferior ore, Pestarena, amalgamated at Battigio establishment, we obtained 139 ozs. 3 dwts. 21 grs. From 60 tons amalgamated at Battigio from Cani Mine yielded 29 ozs. 16 dwts. 18 grs. (22 1/2 tons of this ore was treated by way of experiments on the different qualities of inferior ore); and from 434 tons amalgamated at the Val Toppa establishment from the Val Toppa mines, we obtained 191 ozs. 0 dwts. 12 grs. During the past month we did not work so many mills as we should have not fallen short of mill beds at Val Toppa establishment, in consequence of the highway not being carriages to the quarry, and at Pestarena on account of one of the dams losing water.—Underground: In the bottom level of Pestarena we have done many repairs; and have with a small pair stopped some in the bottom part of the stope. We have a good lode; it will take us about three months more to reach the richest part of this course of ore. Meanwhile we shall be extracting such quality ore as we have been for some time past. The end driving north at the 70 fm. level yields 3 1/2 ozs. of gold per fathom. The stope in the back of the 46, on a side lode yields 5 ozs. of gold per fathom. The end driving north at the 33, on No. 4 lode, yields 1 oz. per fathom. The end driving south at the 16 fm. level yields 1 oz. of gold per fathom.—Aquavite: The lode in the engine-shaft sinking under the 46 yields 2 1/2 ozs. of gold per fathom. The end driving south at the 46 continues to let out water, and the ground has become more favourable for driving, yielding 1 1/2 ozs. of gold per fathom. The lode in the 33 end, driving south, yields 2 ozs. of gold per fathom. The stope in the back of this level yields 7 ozs. of gold per fathom. The lode in the end of the 23, driving south, yields 5 ozs. of gold per fathom. The stope in the back of this level yields 5 ozs. of gold per fathom. The lode in the end of the 16, driving south, yields 4 ozs. of gold per fathom. The stope in the back of this level yields 6 ozs. of gold per fathom, and the stope in the bottom of the end north 4 1/2 ozs. per fathom. The stope near the boundaries of the two mines at the adit, on a side lode, continues to be very encouraging. We have stope in this lode about 16 metres long and 6 1/2 metres deep. The lode in the bottom yields 5 ozs. of gold per fathom. There is no level driven under this, as at Battigio. We have further reduced the hands at Cani Mine.—Val Toppa Mine: In the cross-cut east, at No. 4 level, we have gone through a lode of decomposed rock, with stones of quartz. At No. 3 level there is no change to report in either of the cross-cuts driving east; each continues to let out plenty of water. The winze from the Marmo Rosso level has been communicated to the level driving on the near or flat lode at No. 2 level. The lode in the end driving from the southern cross-cut north has divided in two parts, the western part being 1 1/2 foot wide, and the eastern part 4 feet wide, each chiefly quartz, with a little pyrites. The winze above-mentioned from Marmo Rosso came down on the western part, known as flat lode. The lode in the end driving south from this cross-cut, on the new lode, is 2 1/2 feet wide, and the ore from this lode was last week by a trial 6 1/2 ozs. of gold per ton. We have commenced to sink a new winze opposite the cross-cut; we estimate the lode in this winze to be worth 6 ozs. of gold per fathom. The lode in the end driving south from first cross-cut is 6 feet wide, and north 5 feet wide. In the last-mentioned direction the lode has changed its course, turning more towards the quartz lode. The lode in this end never looked better than at present. We have commenced a new cross-cut at this No. 2 level, 60 metres further north, to reach the flat and new lode. Nothing new to report on the great quartz lode.—Surface: At Pestarena we have commenced again to build the wall against the bank of the river with 15 men; this work will be continued as long as the weather permits. We are doing a little towards making a new road from the Aquavite adit towards the Pestarena, where we intend to make the new dressing-floors in place of the one carried away by the flood, and to serve for both mines. Since the water became low in the Anza we found more damages done to the dams at Battigio and Piedimulera than we calculated on. We shall have to repair these dams this winter. We are now making provisions for bringing some timber to Pestarena Mines; a part of it is on the road, and in a few days after the ice is in it will be delivered at the mine. At Val Toppa we have at the mine timber enough to last until the spring.

[For remainder of Foreign Mines, see to-day's Supplement.]

A petition for winding-up the Penryn Granite Quarries Company (Limited) is to be heard before Vice-Chancellor Mailes on Friday.

## "UNDERGROUND LIFE; OR, MINES AND MINERS."

By far the readiest means of inducing the general reader to interest himself in industrial pursuits with which he is not immediately connected is to present him with the information which it is desired he should possess in the form of an attractive narrative, which can be read for pleasure as well as for business; and hence it is that Mr. Bristow's translation\* of Mr. Simonin's "Vie Souterraine" will be favourably received by a very large number of readers. The work is divided into three parts, devoted to coal, metals, and precious stones respectively. The work having been originally written and suited to the tastes of Frenchmen, of course, regarded from a French point of view, and, consequently, Mr. Simonin does not give any special prominence to the mineral industries of this country. Referring to this fact, Mr. Bristow continues that "it would have been impossible, therefore, to give a more elaborate account of British Mines and Miners without remodelling Mr. Simonin's book. Under the circumstances he has chosen to preserve his text entire when it was possible to do so, making only some few interpolations where it appeared to him to be absolutely necessary." The character of the work will be best judged of from a brief epitome of its contents.

The book commences with a chapter on "Coal Mines—Past and Present," which contains accounts of the earliest attempts to introduce mineral fuel into Paris. It appears that in 1769, wood being then very dear in Paris, some English merchants sent some coal from Newcastle up the Seine to Paris, but although the British fuel was favourably reported upon by the Academies of Science and Medicine it was objected to by the public, on the ground that it soiled the linen when drying, caused affections of the chest, and impaired the delicacy of the female complexion. The mineral had been as ill-received in London as in Paris, but in 1866 imported 6,132,265 tons, and Paris annually consumes about 1,000,000 tons. In the present day England herself owes no small part of her industrial and maritime power to her coal; skilful chemists have recently produced most brilliant colours from it; and, finally, it is from coal that carbolic acid has been extracted, which possesses very remarkable antiseptic properties.

The next chapter, treating of the Origin of Coal, contains an interesting account of the hypotheses generally accepted upon the subject, with comments upon them. This chapter will be especially attractive from the many beautiful engravings of carboniferous fossils which it contains.

The third chapter is devoted to History and Tradition, commencing, of course, with Thespisaurus, and tracing the progress of discovery carefully through the periods when Houllis discovered coal at Liège, the application of coal in Savary's, Newcomen's, and other engines, down to the date already mentioned.

The chapter entitled "The Black Country" will be valued for the numerous beautifully executed geological maps it contains; and that which succeeds it, entitled "How Coal is Discovered," contains a large amount of useful information connected with borings and boring machinery, and a sketch of Mr. Godwin-Austen's opinion as to the existence of coal beneath the south-eastern counties.

The chapter on "Shafts and Levels" is included by some curious remarks upon the commercial results of coal mining. It is said that on the supposition that every ton of coal got yields a profit of 2s. 1d. (which is nearly the average profit made in the French collieries), and assuming the entire production to be at the present moment 12,000,000 tons, we thus arrive at a total profit for all the collieries of France of 1,200,0001., or 10 per cent. on the capital sunk.

In England and Belgium the calculation furnishes similar results, but it must be remembered that above 100,000,000 tons of coal are raised in the British Isles. This revenue is shared in comparison with all the risks incurred, and the high rate of interest generally paid for money in the present day. It is not fair that some of the capital employed in the most precarious of industrial pursuits should yield large returns, when so much has been sacrificed and irretrievably lost on worthless or unremunerative undertakings? When a coal mine yields good dividends it ought to prove a source of congratulation to think that the favourable results have been most frequently deserved, and purchased at the cost of prolonged and wearisome efforts, of many years of patience and perseverance, and by the expenditure of large sums of money. In certain cases when success has been attained it is completely undeserved, and the most sanguine hopes of the department of the Nord furnish many instances of this, as where a certain share, which when issued was worth 10001., is now worth 25,0001. There is an instance of a mine the value of a share in which has risen from 6401. to 28001.; in another case the value has increased tenfold, rising from 401. to 4001. If such facts did not exist it would be a cause for regret. It is by the attraction of such large gains that speculators are induced to join in such undertakings, to risk their capital, and arrive at the discovery of the coal. Without such inducements few persons would have the courage to explore the ground for coal beyond the limits where it is already known to be, and all the great works which in France have led to the discovery of the coal basins of Valenciennes, the Moselle, and the Pas-de-Calais, would never have been undertaken. These remarks are equally applicable, or rather more so, to coal mining in this country, where large fortunes have been expended—as at Monkwearmouth and Shire Oaks Collieries—before the adventurer was rewarded by reaching the coal.

The chapter How Coal is Worked is an especially interesting one. It is here remarked that England in the working of her coal mines has not that practical superiority which is generally assigned to her. She has only received a larger share than any other country by an unexampled accumulation of mineral fuel.

A certain mine is mentioned, the produce of which exceeds 2500 tons per day, or from 700,000 to 800,000 tons per year, which in France is the produce of whole coal fields; 15 English collieries of this importance would take the place of all the French deposits, for they hardly reach 12,000,000 tons a year. The small Newcastle coal field alone furnishes double this last amount. England, surrounded by coasts which are everywhere accessible, is furnished beside with a network of iron roads and navigable ways, which are more developed than those of the Continent, and it must also be said that the absence of all Government interference enables her industry to have full play, for no restrictive measures fetter the liberty of labour in England. It is in this last respect that the French should desire to resemble the English, while as regards the able working of coal mines, they may in their turn borrow from the French more than one happy inspiration. The chapters describing falls of roof and inundations, and shaft accidents, are really startling narratives; the chapters, The Soldier of the Abyss and To-Day and To-Morrow, forming an admirable conclusion to the portion of the work relating to coal.

The portion of the book relating to Metalliferous Mines is treated in an equally satisfactory manner, the section being, like the former, divided into 12 chapters, treating respectively of the Stages of the Human Race, the Laboratory of Nature, the Princes of the Mineral Kingdom, the Metalliferous World, Eureka, Hidden Treasures, the Attack on the Ground, the Slayers of the Catacomb, Crush and Washing, the Phalanx of Miners, and the Wealth of Nations. Low's Rock-Boring Machine is very prominently noticed, and the various accounts of the characteristics of the products of 30 different mountains and districts are particularly attractive, the illustrations which accompany it being really beautiful specimens of engraving. The concluding part, that relating to mines of precious stones, although shorter than the other sections, contains an enormous amount of information, which will be read with interest by all classes.

The work, as a whole, is probably one of the most attractive which has ever been issued on the subject. The chromo-lithographs and engravings are executed in the best possible style, the engravings are clear and distinct, and the printing is an excellent specimen of workmanship. "Underground Life" is well worthy of a place in the library of all connected with mines and mining.

\* "Underground Life; or, Mines and Miners." By L. SIMONIN. Translated, adapted to the present state of the French language, and edited by H. W. Bristow, F.R.S. London: Chapman and Hall, Piccadilly.

THE ROYAL ALMANAC OF ENGLAND FOR 1869.—Under this title Messrs. Bartlett and Chapman, of Bucklebury, have issued a most useful and interesting work, the subject matter having been selected with great care, and with a view to make the almanac not only a calendar for the year, but a necessity to men of business and to most literary tables. Amongst the contents are a set of annuity tables, list of officers of the City of London, members of the House of Commons, country bankers and their London agents, County Courts and list of fees, the value in British currency of foreign monies, garden notes, Government statistics, the names of knights and baronets, the peerage, Police Courts, Post Office regulations, Public Acts of Parliament passed in 1867-8, stamp, taxes, and Excise duties, and a mass of other important and useful information. The book is well printed and neatly bound, and altogether forms a valuable addition to the list of useful works of reference published this year.

## MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

TACUARI.—The meeting of this company is called for Tuesday next, when the proceedings will, doubtless, be of an interesting character. This property is situated near that of the St. John del Rey Company; it is of vast extent, and has been acquired upon favourable terms. The Tacuari ground is, no doubt, one of the richest sources of gold in the country, and is being worked by a gentleman who was formerly connected with the property, residing in the locality for many years, and watching the working of the mine, I learned that hundreds of thousands of gold had been raised in a very small space of ground. The stratum is soft, and congenial for gold, and there is sufficient water for a wheel large enough for pumping and dressing purposes. Under such management as that of Capt. Treloar, with Mr. Haymen's administration financially, the operations of the company must result in success.

WEST TOLGUS has suffered, in common with many other Cornish mines, from the consequences of the long-continued heavy rains. The effect at West Tolgus was to encrease the water so much that the Wheal Raven adit level could not carry it; so that, with the engine working at full speed, the water has risen to within a few feet of the adit. Every effort has been made to remedy the matter as quickly as possible; and it is hoped that by Saturday (this day) the adit will be clear, and the engine forking the water rapidly.

PRINCES OF WALES.—The 50-in. cylinder-engine erected on this mine is expected to be at work during the next week, when operations at the shaft will be resumed, and persons best acquainted with the mine believe a course of copper ore will be met with within a few fathoms of the present works in the shaft.

NORTH TREKERRY.—The 120 has improved to 4 tons per fathom, and the 110 to 2 1/2 tons. The general prospects of the mine are improving.

## [ADVERTISEMENT.]

From Mr. JAMES HUME.—The recent advances in the prices of tin and copper have been followed by a general rise in the shares of productive British mines, and a run of prosperity is reasonably expected. There is ample scope for investors, and it is scarcely possible to do wrong in buying in a rising market. Young copper mines, whose workings are at shallow depths, offer great chances to the capitalist; one in particular may be instance—WHEAL MARY FLORENCE (Limited). The agent's report of this week is very favourable. He states—"In the 15 west the driving is about to enter the ore ground driven over by the level above, from which I expect large quantities of copper ore. The lode is now worth 2 tons of copper ore per fathom. In the 25 level, 10 fms. deeper, we have driven west 10 fms., and are approaching the ore ground gone down in the bottom of the 15. We hope to sample, at the end of this month, about 30 tons of copper ore." This is a good speculation. EAST CARADON is improving greatly in depth, and speculation is again being drawn to this mine, although there was no dividend declared at the last meeting. WHEAL UNY is

now a profit-making mine, and in March the commencement of dividends may be expected. Last quarter they returned 76 tons of tin, at a profit of 7931. 4s. 6d. SOUTH CONDURROW: The prospects here are of a very promising character—a course of tin 25 fms. long, and the lode 18 ft. wide, worth 401. to 501. per fathom. The supply of tin is described as almost unlimited, and such as to give good profits. It is probable these shares will have a good rise. MARKE VALLEY has given a 5s. dividend. This share has been recommended by me from 21. upwards. NEW WHEAL LOVELL shares are enquired for at present prices—2 1/2 to 2 3/4. PRINCE OF WALES shares show indications of rallying from the extreme low prices lately ruling. CHIVERTON shares are in less request, at 2 1/2 to 3 1/4, after reaching 71. HINGSTON DOWN is said to be improving in the western levels; shares seem cheap. CREBOR shares are occasionally asked for, and considered a fair speculation for a rise. The improved tone apparent in dealings, and the activity being displayed, are calculated to carry quotations very much higher.

THE CORNISH MINE SHARE MARKET.—The advance in the Tin Standard on Friday last, and the more promising state of the copper market through the advice received of diminished importations from Chili and other places, have caused business in the Cornish Mine Share Market within the last few days to wear a livelier appearance than for several weeks past, and there have been pretty many transactions at generally firmer rates in both tin and copper mines. The following more particularly have been dealt in since last week:—Tincroft freely dealt in, at 17 1/2; Cook's Kitchen in demand, at 13 1/2 to 13 3/4; West Frances offered at 42; Wheal Uny, 34; Marke Valley in request, at 9 to 9 1/4; East Caradon, 8 to 8 1/4; a few enquiries for Pendarvas United, at 15 to 20; Prince of Wales, 22s. 6d. to 24s.; Providence firm, at 33 to 34; West Seton enquired for, at 185 to 190; Wheal Seton, 67 1/2 to 70; Rosewell Hill, 13 1/2 to 14; New Lovell, 2 to 2 1/4; Chiverton shares have receded to 2 1/4, 3 1/2, in consequence of a reported falling off in the winze. Chiverton Moor have been flat, at 5 1/4 to 5 1/2; North Trekerby, 16s. to 18s.; Emily Honrietta, buyers at 21; Carn Brea, 21 to 23.—West Briton.

## SALES OF COPPER ORES.

COPPER ORES SOLD AT THE SWANSEA TICKETINGS FOR THE

QUARTER ENDING DECEMBER, 1868:—

Mines.	BRITISH.	Tons.	Amount.
Knockmahon .....	1525 .....	£ 9,132 1 0	
Berehaven .....	546 .....	3,271 19 6	
Dylliffe .....	328 .....	1,310 13 6	
Ballycumshack .....	208 .....	1,114 0 0	
Total .....	2597 .....	£14,828 14 0	

## COLONIAL.

Cape .....	502 .....	£11,840 7 6	
Moonta .....	397 .....	4,201 7 0	
Paramatta .....	166 .....	2,618 15 6	
Wallaroo .....	166 .....	960 15 0	
New Cornwall .....	53 .....	465 1 6	
Concordia .....	10 .....	142 7 0	
Pomona .....	3 .....	93 0 0	
Australian .....	12 .....	90 7 0	
Total .....	1357 .....	£20,412 8 6	

## FOREIGN.

Cuba .....	1759 .....	£23,747 6 0	
Lisbon .....	68 .....	997 18 6	
Chili .....	16 .....	690 0 0	
Azambuja .....	24 .....	458 8 6	
French Argentine .....	46 .....	243 15 6	
Spanish .....	30 .....	238 4 0	
Total .....	1978 .....	£26,719 17 6	

## RECAPITULATION.

British .....	2597 .....	£14,828 14 0	
Colonial .....	1357 .....	20,412 8 6	
Foreign .....	1978 .....	26,719 17 6	
Sundries .....	138 .....	1,796 15 6	
Total .....	6070 .....	£63,757 0 6	

COMPANIES BY WHOM THE ORES WERE PURCHASED:—

Copper Miners' Company .....	442 .....	£ 2,883 1 3	
Freeman and Co. .....	367 .....	4,653 0 3	
P. Grenfell and Sons .....	63 .....	6,111 0 6	
Sims, Williams, and Co. .....	823 .....	11,367 8 0	
Vivian and Sons .....	1173 .....	12,656 5 0	
Williams, Foster, and Co. .....	1095 .....	13,086 13 3	
British and Foreign Copper Company .....	10 .....	426 0 0	
Mason and Elkington .....	714 .....	4,744 10 6	
Bankart and Sons .....	135 .....	464 18 0	
Charles Lambert .....	336 .....	1,461 2 0	
Ravenhead Copper Company .....	62 .....	1,340 1 0	
Sweetland, Tuttle, and Co. .....	229 .....	8,893 17 0	
Landore Copper Company .....	20 .....	610 7 6	
Total .....	6070 .....	£63,757 0 6	

IMPROVED STEAM STAMP MILL.—A very efficient stamp mill is at present being introduced by the New York Steam Engine Company, and those who have adopted it express themselves thoroughly satisfied with its operation. An excellent illustrated description of the machine has been published in a recent number of the *American Journal of Mining*, from which it appears that the stamps which are attached directly to steam piston rods are arranged in a group of four, and surrounded by a screen. The battery in which the stamps work is surrounded by a trough cast in the bed-plate of the mill. The ore to be crushed is brought through a hopper directly into the centre of the group of stamps, and is distributed equally to all, and as fast as it is pulverised finely enough it is delivered on all sides through the screen into the trough. The stamping is done wet, and the very finest portion of the powder is washed over from the trough by the overflow of water through spouts into an outer surrounding gutter. There is a separate steam cylinder and piston for each stamp. The cylinders are all cast together with a surrounding exhaust steam jacket, and sole plate, and are supported on wrought-iron pillars erected upon the bedplate. All the cylinders can be adjusted simultaneously by means of nuts fixed to screw threads on pillars, for the purpose of adjusting the clearance between the piston and the top and bottom of the cylinder, and for maintaining a uniform clearance by lowering the cylinders as the stamps wear away and allow the pistons to descend lower. The steam acts above and below the pistons, so that it not only lifts the stamps, but the force of its downward pressure on the pistons is added to that due to the weight and fall of the stamps. Each cylinder has an independent valve and automatic valve-gear, so that each piston and stamp may work independently of all the others. The valves are short double-faced slides, working horizontally in the chests, and operated partly by the steam and partly by conical surfaces on the upper parts of the piston and stamp rods, which pass upward beyond the tops of the steam cylinders into closed central caps on the cylinder covers. This method of operating the valves permits the stamps and pistons to turn freely as required. The cylinders are 1 1/2 in. in diameter, and the pistons have from 6 to 8 in. stroke, according to the depth of material in the battery. The machine is estimated at about 30-horse power, and will crush 30 tons of hard ore in 24 hours.

GUN-COTTON.—An interesting practical exhibition of the newly-discovered properties of gun-cotton when fired by concussion, instead of by the direct application of flame or heat, was afforded at Woolwich on Monday. The huge 36-in. Mallet mortar, weighing 52 tons, which was placed in the marshes in 1857, and designed to fire a shell of 2548 lbs. (empty), has for some time past been sinking in its great wooden bed, owing to the gradual decay of the wood. It was thought dangerous to run the risk of its falling upon any visitor by leaving it in this position. But weights of 52 tons cannot be moved for nothing. To erect sheers and the necessary appliances for raising the mortar would have entailed an expenditure estimated at about 501. Under these circumstances, recourse was had to gun-cotton to destroy the bed, and precipitate the fall of the mortar. Four charges of 4 ozs. each, four of 6 ozs., and one of 8 ozs. (total, 48 ozs.) were placed on the wooden bed, and exploded by means of mining fuses charged with detonating composition. The material being rotten was especially unfavourable for the exertion of explosive force—for the force had, so to speak, nothing to act against. But what could be done was done. The huge bed was shattered, and particles flew in all directions. The mortar, although it altered its position, refused, however, to fall, being held to some extent by a thick wrought-iron screw bolt. The next experiment was made upon this bolt. A 1-lb. disc of compressed gun-cotton was tied to the bolt and exploded. The explosion was thus wholly unconfined. Nevertheless the bolt was broken in two places, a result which exceeded the most sanguine anticipations. Still the huge mortar remained in its position. A third operation had, therefore, to be made. This time two 1-lb. charges were disposed under the left trunnion, and one 1-lb. charge was so placed as to give the mortar a kick behind. The explosion of these charges completed the work. The monster mortar slowly and gracefully bowed forward and fell to the ground. The gun-cotton had thoroughly done its work, at a cost of 14s. 6d.—*Pail Mail Gazette*.

LABUAN COAL MINES.—Advices from Labuan give at length satisfactory prospects of the working of the coal mines at that island. After the part with of the China Steam and Labuan Coal Company the property was bought for a small sum by a few men of business in Scotland, and placed under an experienced manager, every precaution being taken for the exercise of rigid economy. The result appears to be that there is already a steady out-turn of coal, and that attention is being paid at Singapore and elsewhere to its valuable peculiarities for steam and gas purposes. At the same time the working even on its present scale has been brought to yield a surplus over expenses. The latest accounts confirm the impression that the quantity available is practically inexhaustible.

HOLLOWAY'S OINTMENT AND PILLS.—CONSTANT SUCCESS.—No diseases are more trying to the temper, or more exhausting to the constitution, than the pains in the muscles and joints, caused by exposure to wet or cold



# Herodsfoot Old Mine,

## NEAR LISKEARD, CORNWALL.

TEMPORARY OFFICE,—No. 53, MOORGATE STREET, LONDON.

IN 1024 SHARES ON THE COST-BOOK SYSTEM.

COMMITTEE OF MANAGEMENT AND OFFICERS TO BE CHOSEN FROM THE GENERAL BODY OF SHAREHOLDERS.

Nearly £50,000 has been paid to the shareholders of Herodsfoot, who have long shared more than 50 per cent. per annum on their first outlay, and, as each successive level in depth develops greater riches, there is as yet no prospect of diminished returns.

The two sets which, until November last, constituted this valuable property, are now separated, one of the landlords having declined to renew the lease to the original lessees.

The mine was worked by two shafts, one in each set—the south shaft being down 175 fathoms, the north shaft about 150 fathoms.

This latter will now be the main shaft of the present company's workings. The levels, which have been very productive, communicate between the two shafts, and are continued on the lode north and south beyond them.

The levels in Herodsfoot Old Mine have been worked to but little

over 120 fms. in depth; all beyond awaits development, while the experience already gained forbids misgivings as to the result, for the levels above have yielded very largely, and those being driven north from the neighbouring and deeper shaft are richer than ever.

In point of economical working the advantages are quite exceptional and peculiar, and it is believed that pitches can be worked and large returns made without other outlay for machinery than that required for lifting and dressing the ore.

The burrows of so-called "attle" have yielded by stamping a large return, and the accumulations of a quarter of a century will afford profitable work for a considerable period. These are now under preparation, and will yield important samplings forthwith.

For shares, apply to— W. COLEMAN, Secretary pro tem.

# North Star Gold Mining Company

## (LIMITED),

Registered under the Companies Acts 1862 and 1867, by which the liability of the shareholders is limited to the amount of their shares.

CAPITAL £225,000, IN 22,500 SHARES OF £10 EACH.

Deposit, £1 upon application and £1 on allotment.

Further calls will be made as soon as an inspection of the mines has been made on behalf of the company. Deposits to be returned in full in the event of no allotment.

Shareholders are to have the power of converting their shares, when fully paid-up, into transferable warrants.

DIRECTORS.

LEWIS R. PRICE, Esq., formerly of Mexico, and now of 115, St. George's-square, S.W.

JOHN S. NEALL, Esq., 7, Addiscombe Villas, Croydon, S.E.

CHARLES LIDDELL, Esq., 24, Abingdon-street, Westminster.

WALTER SHARP, Esq., Sussex-gardens, Hyde-park, W.

GEORGE T. COULTER, Esq., San Francisco, California, U.S.

With power to add to their number.

BANKERS—Messrs. GLYN, MILLS, CURRIE, AND CO.

BROKERS—Messrs. J. HUTCHINSON AND SON, 15, Angel-court, Throgmorton-street, E.C.

SOLICITORS—Messrs. UPTONS, JOHNSON, AND UPTON, 20, Austinfriars, E.C.

SECRETARY—ELIAS TUCKER, Esq.

TEMPORARY OFFICE,—15, ANGEL COURT, THROGMORTON STREET, E.C.

### PROSPECTUS.

This company is formed for the purchase and working of the mines known as the North Star Gold Mines, situated in Grass Valley, Nevada County, California, about 60 miles from Sacramento, the capital of California, and 12 miles from the Central Pacific Railroad.

The following statement as to these mines is by Mr. GEORGE T. COULTER, of California, at present residing in London, who is one of the directors of the company and a part owner of the mines:—

These mines are now, and have been for some years, in full and successful operation.

The property is freehold and exempt from all royalties. The actual results of the workings up to date, show that the mines have, since their commencement, provided the capital requisite for their own development, including an outlay of about £40,000 for machinery, plant, &c., and returned a clear net profit of more than £125,000 to their proprietors.

Since the first opening of these mines the gross returns of gold have yielded an amount of about £300,000, derived from the crushing and amalgamating of some 50,000 tons quartz.

The average yield of the quartz has been found to be from 1½ to 1¾ ozs. gold per ton quartz, representing in value from £6 to £7; whilst, on the other hand, the total expenses of mining and extraction do not exceed £3 2s. 6d. per ton.

During the year 1868, from the 1st January up to the 10th July (working with 16 stamp heads), the amount of gold extracted and sold produced £23,264 5s., or an average return of £367 4s. per month. At the end of July, however, the number of stamps had been increased to 24, and the present yield per month is, according to latest advice, above £5000.

The mine has been opened out to a depth of 900 feet from the surface by shafts and levels on the course of the lode, which has improved in strength and richness in depth. The amount of stopping ground actually proved and available for immediate extraction is considered sufficient to supply 26 heads of stamps for the next 10 years, which, taking the quartz at a value of only £6 per ton, should yield a net annual profit of £60,000 per annum. This estimate does not include the returns derivable from the large extent of virgin ground at the other parts of the lodes as yet untouched, amongst which are the recent important discoveries on the Rush and Layton Ledge; nor from the development of the mine below its present depth (900 feet), for which provision has already been made by the recent erection of powerful machinery, amply sufficient for working the mine to a depth of 2000 feet below the surface, if required.

The acquisition of this valuable property, consisting of mines and mineral rights, arable and forest land, erections, steam-engines, pumping, winding, stamping, dressing, and amalgamating machinery, buildings, offices, plant, stores, &c., all in efficient working order, and without any reservation of rights

### WATSON BROTHERS' MINING CIRCULAR

WATSON BROTHERS,

Mining Agents, Stock and Share Dealers, &c.  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Messrs. WATSON BROTHERS return their most sincere thanks for the great patronage bestowed and confidence reposed in their firm for 25 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the Mining Journal, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in this column. In the year 1848, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS they are enabled to offer, thus publicly, their best services to all connected with mine or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON BROTHERS also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON BROTHERS are also daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON BROTHERS having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

**SATURDAY.**—A good demand to-day for West Franches shares, at 44 to 45; Buller, 8 to 10; West Chiverton, 59 to 61; Rosewall Hill and Ransom, 25s. to 26s.; East Caradon, 7½ to 8; Great North Laxey, 12s. 6d. to 17s. 6d.; Great Retallack, 2½ to 3; New Lovell, 2 to 2½; Wheel Chiverton, 8 to 8½; Chiverton Moor, 3½ to 4; East Grenville, 3½ to 4; Prince of Wales, 2½ to 3½; North Trekerby, 15s. to 17s. 6d.

**MONDAY.**—A good demand for West Franches shares, which advanced to 44, 1/2, and Chiverton to 4½, 1/2; North Trekerby, 15s. to 17s.; Chontales, 2½ to 3½; East Grenville, 3½ to 4; Prince of Wales, 2½ to 3½; New Lovell, 2 to 2½; Don Pedro, 3½ to 4; Wheel Chiverton, 8s. to 8½; West Chiverton, 59 to 61.

**TUESDAY.**—Market rather quiet to-day; dealers engaged with the settlement.

or royalties whatsoever, may be arranged for at the sum of \$1,000,000, of which the present proprietors will accept \$250,000, or their equivalent in English money, in fully paid up shares of the company.

The vendors will not require the purchase money to be paid before the legal advisers of the company in California have certified that the property has been duly transferred to the company, and until every facility shall have been offered for testing the correctness of this account of the mines in all essential particulars, both as to present workings and future prospects.

This property is capable of being developed on a much larger scale than at present, and the yield of gold might be much increased by the erection of additional stamp heads, which could be done at a comparatively trifling outlay. The transfer of the mines to the company need not occasion any stoppage of the works, and the usual monthly returns of gold will be received from the mines as heretofore, from the moment they come into the possession of the company.

The mines have been carefully inspected and reported upon by Prof. Silliman, who is considered as the highest authority upon these subjects in the United States; other reports and opinions have been given by Mr. Beckwith, Mr. Stanger, Mr. Cronise, and Mr. J. A. Phillips and Mr. John Petherick, of London, which all concur in representing this mining property as one of great value and capabilities.

The Memorandum and Articles of Association, and the above statement of Mr. COULTER, and a report by the well-known engineer, Mr. DAVID FORBES, F.R.S., confirmatory of such statement, and of the reports therein referred to, together with surveys and plans of the mines, and other documents, and a large number of samples of the ores may be seen at the office of the company.

### FORM OF APPLICATION FOR SHARES.

To the directors of the NORTH STAR GOLD MINING COMPANY (Limited).  
GENTLEMEN,—Having paid £ to your bankers, I request that you will allot me shares in the North Star Gold Mining Company (Limited), and I hereby agree to accept such shares, or any less number that may be allotted to me, and to pay the calls thereon, subject to the provisions of the Companies Acts, 1862 and 1867, and of the Articles of Association.

Name in full .....  
Address .....  
Occupation, if any .....  
Usual signature .....

Date.....  
The above form, when filled up, is to be left with the bankers on payment of the deposit.

West Franches, 44 to 45; Chiverton, 4 to 4½; Seton, 62½ to 67½; Great Retallack, 2½ to 3; Prince of Wales, 2½ to 3½; Great Laxey, 19 to 20; Don Pedro, 3½ to 4; Taquaril, 11s. 6d. to 13s. 6d.; Chontales, 2 to 2½.

**WEDNESDAY.**—Market moderately active. East Caradon, Prince of Wales, and North Trekerby chiefly in demand. East Caradon, 8 to 8½; Prince of Wales, 2½ to 3½; North Trekerby, 15s. to 18s.; Marke Valley, 9 to 9½; Great Laxey, 19 to 20; Great North Laxey, 12s. 6d. to 17s. 6d.; Buller, 8 to 10; Great Retallack, 2½ to 3; East Grenville, 3½ to 4; Chiverton, 3½ to 4; Chontales, 1½ to 2½; Don Pedro, 3½ to 4.

**THURSDAY.**—Great excitement in East Caradon. Shares opened 8½, sellers, and advanced to 10, buyers. West Franches and New Lovell shares also in demand. East Caradon, 9½ to 10½; West Franches, 43 to 45; New Lovell, 2½ to 3; Prince of Wales, 2½ to 2½; West Chiverton, 59 to 61; Don Pedro, 3½ to 4; Chontales, 1½ to 2.

**FRIDAY.**—An active demand for West Franches, East Caradon, Great Retallack, Seton, Chiverton, New Lovell, South Herodsfoot, East Grenville, and West Chiverton. West Franches, 43 to 45; East Caradon, 9 to 9½; Seton, 67½ to 72½; Chiverton, 3½ to 4; New Lovell, 2½ to 3; South Herodsfoot, 15s. to 20s.; East Grenville, 3½ to 4; West Chiverton, 59 to 61; Chiverton Moor, 3½ to 4; North Trekerby, 15s. to 22s. 6d.; Prince of Wales, 2½ to 3½; Great Retallack, 2½ to 3; Chontales, 1½ to 2; Don Pedro, 4 to 4½.

### Mining Correspondence.

#### BRITISH MINES.

**BRONFLOYD.**—Thomas Kemp, Jan. 9: The settings for January are—Six men to drive the 73 west of cross-cut, from new shaft, at 160s. per fathom; the part of the lode opened on is producing saving work for lead. Four men to open on and stop the lode west of cross-cut in the 62; the lode here is still looking exceedingly well, and is worth fully 2½ tons of ore per cubic fathom. The winze sinking below this level, under a bargain to put it through to the 73, for 110s., is now down 7½ fms.; the part of the lode carried by the winze is composed of blue slate, intermixed with branches of lead ore. Eight men to strip down the south side of the lode, under the 52; lode worth 1½ ton of ore per cubic fathom. Two men to drive the 52 east of Barton's cross-cut, on the north part of the lode, at 70s. per fathom; lode at present unproductive. Two men to stop down the south part of the lode from the 52, near to and west of the old shaft, under the point where you had the rich ore above the 40, of the old mine, in 1860, as, at this increased depth the lode should, I think, have another trial. Four men to stop above the 52, west of winze; lode producing 1 ton of ore per cubic fathom. Four men to drive the 40 east, on the south part of the lode, at 65s. per fm.; this end is getting more settled, and I look for an improvement shortly. If the weather keeps favourable we shall sample about 120 tons of ore in the present quarter; and when the winze is through to the 73 our sales will be increased to 150 tons per quarter. The reserves of the mine are large, and we shall not require to sink the new shaft any deeper for 12 months. The mine and machinery are in good working order.

—Thomas Kemp, Jan. 13: The only change which has taken place in the mine since you left for London has been in the 73, west of cross-cut, where the lode is now worth from 15 to 20 cwt. of ore per fathom.

**BRYN GWIG.**—S. Harper, Jan. 13: The lode in the 85, west from Bramwell's shaft, still continues small, with occasionally small deposits of lead ore, and having a strong opinion that the lode was much more productive in the bottom of the level than in the roof, I put the shaftmen to stop the bottom for about one yard in depth, and am glad to say I am not disappointed in the produce of the lode. We have raised about 2 or 3 tons of good lead ore, and the lode is still looking very well. I have again put the men to go on with the level, having about 2 fms. more to communicate with the level from Adams's winze, which, if all goes on well, we hope to be in about a week from this time. The lode in the 75, west from said shaft, is still rather small, but of a more kindly appearance, with a branch of lead about 2 or 3 in. wide; and from the appearance of the rock, as well as the lode, I think we are on the eve of a good

deposit of lead. The lode in the 85, east from Adams's winze, is at present small, and only producing lumps of lead ore—sizing work for lead ore. The Shaft: In opening the 60 yard level west I find that the old workers have been down at about this point; therefore I thought it more prudent to suspend the drive, and to commence sinking a winze in the bottom of said level, which we have done, and are glad to say we have met with some fair lumps of lead. We have opened about 3 or 4 yards in the winze, and we have drawn to surface to-day three cartloads of fine lead for the washing. I estimate it to be from 1 ton to 30 cwt. of lead; price for sinking, 30s. per yard, to bring it to surface. The tribute pitches are much the same as for some time past. I am glad to say that the water at our engine has greatly fallen off, inasmuch that it continues to fall off again for another week I hope to carry on the mine by working the engine only by day, which will be a very great item in the coal bill, &c. At the surface I have done everything I thought was advisable, in making water drainings, and to carry off the water from going down into the mine, which has had a very good effect on our engine. There is nothing more of importance to notice.

**BRYNPOSTIG.**—John Kitto, Jan. 7: We are getting on as fast as we possibly can with the sinking of the engine-shaft below the 24 fm. level; sinking by nine men, at 13s. per fathom; but the large quantity of water with which we have to contend, in proportion to the size of our engine, greatly retards our progress. The lode in the shaft is about 4 ft. wide, and worth ½ ton of lead ore per fathom, besides a quantity of blende. There has been no improvement in the 24 fathom level ends since my last report. The eastern end is still opening up tribute ground, that will work in from 3s. to 4s. per ton. The western end is still letting out a large quantity of water, and I am daily expecting to meet with the run of ore we had in the 12 fm. level, and from which the greater part of our returns were made. The tribute pitches in the back of the 24 are as last reported, and are being worked at 60s. 50s., and 3s. per ton, and yielding a fair quantity of ore. The adit level is being driven into Rhoswen sett by four men, and fair progress is being made; but, so far, the lode has not undergone any important change; but, judging from the old workings near the surface, we may expect are long to have the best part of the mine in this direction.

**BRYNYSWITTH.**—J. Tregoning, Jan. 12: We have cut a branch of spar in the cross-cut north, containing a little ore; as it is going due north I think it is a feeder to the lode. We must be getting very near to it, as I never saw the end letting out so much water before.

**BWADRIN CONSOLS.**—R. Northey, Jan. 13: In the 35 we are cross-cutting through the lode, which is improving, and now worth 12 cwt. per fathom, and we are not yet through the lode; we are making fair progress in the rise in the back of the 45, and the lode it of equal value as last reported. The stopes are just as usual, and, on an average, will produce their usual quantities of lead ore. All well, we shall sample on Tuesday next 30 tons of lead ore. The weather at present is favourable for dressing.

**BWLCH CONSOLS.**—R. Northey, Jan. 13: The lode in the 30 has improved in size and appearance; it is now 1½ ft. wide, and looking more promising for lead ore. The lode in the 50 is 1 ft. 6 in. wide, and 3 ft. per ton, and yielding a fair quantity of ore. The lode in the 60 is a little disordered by a cross head, but this, I think, is only temporary, as we have full 40 fms. to drive to reach the eastern end of the ore ground discovered in the levels above. The 70 has been delayed in consequence of the drawing-machine not being able to draw away the stuff. The lode in Davies's drift will produce 10 cwt. per fathom. The stopes are as usual. I hope to start the drawing-machine on Friday next. All well, and should the weather keep open, as at present, we shall sample on Tuesday next 50 tons of ore.

**CAPR CORNWALL.**—B. Pryor, E. Hosking, Jan. 13: The ground in the 70 and 100 fm. level cross-cuts continue much the same as last week, and no particular change has taken place in the mine since last report.

**CAPR BANHAGLOG, OR EAST MID-WALES.**—J. Kitto, Jan. 7: The sinking of the engine-shaft together with the driving of the deep adit level west is progressing favourably, and in the latter the lode is about 4 ft. wide, of a healthy and promising appearance, and such as in my opinion can scarcely fail to be profitably productive at a reasonable depth. We shall commence to sink a sump as soon as practicable below the adit level on the bunch of ore we passed through in driving, and from which we may reasonably expect to raise a large quantity of ore. The smithy, carpenter's shop, store room, and office are all up and covered in, and, with the exception of the latter, are quite completed, and equal to the requirements of the mine for years to come. We shall commence with the building of the wheel case, &c., as soon as the days get a little longer, and the weather a little more favourable.

**CARADON CONSOLS.**—S. Bennetts, Jan. 12: There has been scarcely any of the gossan lode broken during the week; the end has just passed the small spar cross-course. The north cross-cut is in the midst of an elvan; and the south cross-cut has become quite wet, with more peach marked with the granite; I think the main lode is near at hand. The Clymo's lode, in the 78 west, is slightly more lode-to-day.

**CASTELL CARN DOCHAN (Gold).**—J. Parry, Jan. 13: Since my last report I am happy to state that we have found a little more visible gold in the lode-stuff from the deep adit drive; it is not of a rich character, but it is sufficient to prove the existence of visible gold at a good depth. The ground driven through last month was 2 fms. 4 ft.; the present price for driving is 7s. per fathom.

**CHANTRELL.**—W. Wasley, Jan. 14: Owing to a branch having come across the stopes in the roof of the 110 yard level, we have not been able to sink so much ore the last fortnight as we might otherwise expect to have got. I am, however, glad to say that we have got more than enough to pay costs, and hope, when we get to the other side of the cross branch, that the lode will again improve.

**CHIVERTON MOOR.**—J. Juleff, Wm. Bennetts, Jan. 14: In the 85 west the lode is 18 in. wide, with a promising appearance, and producing stones of silver-lead. The lode in the 75 west is producing 6 cwt. of silver-lead per fathom. The 65 fm. level end, east of the cross-course, is in a lode 3 feet wide, composed of quartz and stones of lead. Clog's shaftmen are making good progress in sinking, and are now down 7 fathoms below the 30.

**CWM DARREN.**—R. Clocquer, Jan. 13: I am delighted to inform you that we yesterday broke better ore than was ever yet seen or reported on at this mine, and this is from the very bottom of the shaft. To-day I was underground, and am very proud of our prospects indeed; in the very bottom it looks excellent; and, as I am anxious for you to see some of the silver-lead ore we are now breaking, I will get the carpenter to make a box to-morrow, and will forward you some of the ore by train on Friday next.

**R. Clocquer, Jan. 14:** Since my last week's report, I am glad to be able to say that in deepening our sinking, for making advantage for breaking ground, that our lode not only continues its productivity, but is better in the very bottom than any other place where we have seen it—in fact, the lode, or rather the principal part of it, is nearly 12 in. wide, of which I consider half to be solid silver-lead ore. I do not think I am too sanguine in this. However, you will be able to judge of this for yourself to-day. I have sent off the mine specimens of the ore, one being from the ore as we first cut into it, and the second from the very bottom of our shaft. The ore part of the lode is 4 ft. from the north wall, and not quite so much from the south, through which we have good strings of ore, varying in size from 1 inch downwards. I expect the ore will go down from Bow-street Station to-morrow, and that you will get it on Saturday.

**DEEP LEVEL.**—Jan. 13: In the deep adit level, going west of junction on the Pant-y-Go vein, the lode is about 2 ft. wide, composed of limestone, spar, blende, and producing some nice stones of lead ore. The present end is letting out more water than we have hitherto seen it, and we may reasonably expect that the lode at this point will be found more productive before long. The lode in the deep level, south-west on the deep level vein, is 12 inches wide, composed of spar, and containing spots of lead ore. The tribute pitch over this level, about 16 fms. behind the present end, is a little improved—now yielding 16 cwt. of lead ore per fathom. The 204 yard level, west of Eytton's shaft, is still in a hard and unproductive bar of ground. The winze sinking below the 204, east of Eytton's shaft, is going down in a vein about 18 in. wide, composed of limestone and spar, and producing stones of lead ore, but not much to value as yet; this winze is now down 5 yards below the 204. No time will be lost in carrying it down to the depth of the deep level as soon as possible. The two tribute pitches over the 204, to the east of Eytton's shaft, are now yielding 1 ton of lead ore per fathom each. In the 174 yard level, west of Pant-y-Go shaft, the lode is 2 feet wide, yielding stones of lead ore. The lode looks a little more promising than it did. The Pant-y-Go old engine-shaft is re-opened about 28 yards below the 174; at this point we are come down to a lodge, which we are clearing out. We can see a level branching off east and west at the south end of the lodge, but we cannot get in to examine the vein as yet. We should now prepare to clear out the lodge, and any levels that are driven east and west on the lode at this point, before we commence to work in the shaft. We sampled 24 tons of lead ore yesterday.

**EAST DAKEN.**—Jan. 12: Taylor's Shaft: In the 104 east the lode is 6 to 7 feet wide, yielding 2 tons of ore per fathom. In the 92 east the lode is 4 feet wide, yielding 1½ ton of ore per fathom. In the 80 east the lode is large, and yielding stones of lead at times, but not to value. In the vein sinking below the 80, west of Reed's shaft, the lode is 1 yard wide, producing 5 cwt. of ore per fathom. In the 68 east the lode is 4 feet wide, yielding saving work for dressing. The pitches throughout the mine continue to look well, yielding their usual quantity of ore. At Skinner's shaft, sinking below the 44, the ground is favourable for sinking a winze. The ground is now at Blaenewm the ground is composed of a light clay-slate, and favourable for sinking. In both cross-cuts north at New Pool no change has taken place worthy of notice since last reported on. Our machinery is in good working order.

**EAST GUNSLAKE AND SOUTH BEDFORD UNITED.**—J. Bray, Jan. 13: There is no change in the underground department since last report. During the past week we have got on very well with the surface operations at Impham. The wheel-pit will be completed to-morrow, and we shall at once commence to put in the wheel.

**EAST POOL.**—W. S. Garby, J. Maynard, John Hosking, Jan. 11: The cross-cut at the 180 is driven south of the engine-shaft 3 fms.—Great Lode: The 170 is driven east of the cross-cut 35 fms., and is worth for tin 12s. per fm. The 170 is driven west of the cross-cut 43 fms., and is worth for tin 18s. per fm. Three stopes in the back of this level are worth 25s. per fm. each. The 160 is driven west of the cross-course 44 fms., and is worth for tin 20s. per fm. Three stopes are working in the back of this level; two are worth for tin and copper 18s. per fathom, and the third, 35 fms. east of the cross-cut, is worth for tin copper and tin 40s. per fathom. A cross-cut is set to drive south at the 150, over the last-named stope, to intersect the engine lode. The engine lode: A winze in bottom of the 160, west of cross-cut, is worth for tin 18s. per fm.—South Lode: The 130 is driven east of the cross-course 20 fms., and is worth for tin and copper 10s. per fathom. The rise in the back of the 130 is up 24 fms., and producing a little tin and copper. Two stopes in the bottom of this level are worth for tin and copper 20s. per fathom each. The 100, west of the cross-course, is worth for copper 5s. per fm.

**EAST ROSEWARNE.**—C. Glanville, Jan. 9: Our parcels of ore are all weighed off—No. 1, computed 54 tons, weighed 53 tons 10 cwt. 2 qrs., bought by Williams Foster, and Co., at 8s. 12s. per ton; No. 2, computed 43 tons, weighed 43 tons 7 cwt. 2 qrs., bought by Sims, Williams, and Co., at 7s. 1s. per ton; No. 3, computed 36 tons, weighed 35 tons 12 cwt., bought by the Copper Miners Company, at 3s. 2s. per ton; No. 4, computed 23 tons, weighed 22 tons 9 cwt., bought by Williams, Foster, and Co., at 10s. 6d. per ton. Our water is still very quick; engine working about nine strokes per minute to keep it, but we are all right up to the present time.

**EAST SNAEFELL.**—W. H. Rowe, Jan. 12: The 35 ends are set to drive for another month at 9s. 9s. per fm., including delivery of the stuff to the 20 lodge. The north end is a little easier for driving than on the setting-day, and in the south forecast the ground is getting "loosey," and letting out more water. The 21 south end is set at 7s. per fm.; more spar in the lode, and also getting wet. The sump in the 20 north is sinking at 9s. per fathom, where we are through the "nip" alluded to on Dec. 31, and the lode is rapidly getting stronger.







**Messrs. James and Shakspeare**—*Ore* and *regulus* have been sold as *gh* at 15s. 3d. per unit, and there is still but little offering even at an advance *gd*. to 6d. per unit. The transactions in *Chilli* slabs were again on a very extended scale (we estimate them at fully 2500 tons), but owing to the excitement the market it is difficult to arrive at exact particulars; the cash sales ranged *om* 74L to 75L, arrival and extended prompt lots fetching 74. 10s. up to 76L 10s., according to brand and time for delivery. Yesterday telegrams were received from the *Chilli* and *East Coast* for first lot of 300 tons of *gh* number as equal to about 1800 tons pure copper, of which about 500 tons bars and ingots, the remainder in rough. This news has for a particular effect the market. The *Australian* several hundred tons have been purchased up to 86L cash, 87L to 74. 10s. with extended prompts, a few outside lots being reported at higher rates. *Belgian* advanced *English* on the 12th inst. 21. 10s. per ton, making tough 81L 10s., *delta* sheets 83L 10s., other sorts in proportion; some makers will not accept orders for raw descriptions at the official rates.—The quotations for *English tin* are officially raised on the 8th inst. 2s. per cwt., and a good business has been



done at present prices. Spite of the repeated prognostications that the speculation in foreign would soon collapse, there is as yet no appearance of such an event taking place. Straits and Banca having advanced a further 3s. to 4s. per cwt., with a large business doing, and it would seem that quotations are likely to go higher; even at the highest values there are not many sellers.

The settlement of the fortnightly account took place in the MINING SHARE MARKET this week, and occupied the attention of the dealers for some days, so that general business has been rather slack, and prices have not varied much, except in East Caradon, which suddenly rose from 8½ to 10 on Thursday. There was no sale of copper ore in Cornwall on Thursday, and, consequently, no change in the standard. Tin, it is thought, may be put up again early next week. East Caradon shares have advanced from 8½ to 10 on Thursday, and leave off 9½ to 10½; at the meeting held on Wednesday the accounts showed a profit on the quarter of 150%, and a cash balance in hand of 1959, 16s. 9d. The report states Child's lode has been cut in the 90, worth 12½ to 15½ per fathom. The 80 west is worth 10½. The 115, on the counter, is producing saving work for copper ore. William's shaft is sunk to the 130, and a cross-cut commenced south to intersect the lodes. Marke Valley, 8½ to 9; at the meeting a dividend of 5s. per share was declared, leaving a balance in hand of 2870. Prince of Wales shares have been firmer, and leave off 23s. 6d. to 25s.; the lode in the 65 is 3 feet wide, with good stones of black and grey ore, and likely to improve. Other parts of the mine remain about the same. Drake Walls, 17s. 6d. to 17; we understand a call of 5s. per share has been made, creating some surprise and dissatisfaction, but we have not yet seen the accounts. Providence Mines, 34 to 36; the dividends paid by this mine, on an original outlay of 11,569, have amounted to 97,320, and the present price of tin must materially improve its position. For some years the mine paid 10,000, a year, and last year, during the depressed state of the tin trade, 2800. Carn Brea, 20 to 22½; Chiverton Moor, 5½ to 5¾. Cook's Kitchen, 13 to 14; at the meeting a dividend of 5s. per share was declared. New Lovell, 2½ to 2¾; the mine made a profit on the quarter of 225, 12s. 3d. Tin sold, 1567, 1s. 10d. The lode in the 40 east, we hear, has improved to 30½ per fathom. The lode in the bottom of the 40 is worth 120½ per fathom. A winze below the 50 is worth 80½ per fathom. Don Pedro, 4 to 4½; East Bassett, 8 to 9; East Lovell, 9 to 9½. East Wheal Grenville, 3½ to 3¾; the 85 west is worth 2 tons of ore per fathom, and the 55 west 2½ tons per fm. Frank Mills, 3½ to 3¾; Frontino and Bolivia, 8s. to 10s.

Chontales shares have declined to 1½, 2½; the remittance for November, which had been estimated by Mr. Belt at 800 ozs. of gold, is only 367 ozs., owing to the great fall in the value of the ore (the yield being 5 dwts. per ton) and non-completion of the machinery. Against this disappointment, which must have been anticipated when the shares had a sudden fall a fortnight ago—the report states that good ore had been opened up at Consuelo, San Antonio, and San Domingo. At Consuelo, Piper's shaft yields 10 dwts. of gold; at San Domingo, in the bottom of No. 3 level, 2 ozs.; and the stopes at San Antonio, 12 dwts. per ton. The new tramway was expected to be completed in December. Eight of the new stamps had got to work, and the whole were to be at work in December. Great Laxey, 19 to 20. Great North Laxey, 12s. 6d. to 17s. 6d.; the lode in the 110, or bottom level, is 4 ft. wide, with every appearance of soon being in ore; the 96 fm. level end is worth ½ ton per fathom; stopes, 1 ton. Great Western, 2½ to 2¾; the mine is reported to have improved. We understand more shares were applied for than could be allotted. Great Retalack, 2½ to 2¾; both lodes seem to be improving, and the 40 north, on No. 2, maintains its size and value. Great Wheal Vor, 10 to 11; Herodsfoot, 42 to 44; North Treskerby shares have further advanced to 22s. 6d., 25s. Rosewall Hill and Ransom United, 25s. to 30s.; a correspondent rather questions the accuracy of the information furnished to us last week respecting the great improvement in the western carbons; we received it, however, from a source we considered reliable, and have applied for an explanation, which we shall publish with the original report, if necessary. South Condurrow, 15s. to 17s.; St. Ives Consols, 11 to 12; Tincroft, 17 to 18; West Chiverton, 59 to 61; West Frances, 42 to 44; West Seton, 190 to 200; Wheal Buller, 8 to 10; Wheal Chiverton shares have fluctuated from 3½ to 4½, and leave off 3½ to 3¾; Wheal Emily Henrietta, 20 to 22; Wheal Grenville, 32s. to 34s.; Wheal Kitty (St. Agnes), 4 to 4½; Wheal Mary Ann, 20 to 21; Wheal Seton, 66 to 68; Wheal Telawney, 5½ to 6; Wheal Uny, 3½ to 4; Yudanamutana, 2 to 2½; South Herodsfoot, 17s. 6d. to 22s. 6d.; Taquaril shares have advanced to 13s., 15s.; General Brazilian, 9s. to 11s. South Carn Brea, 5s. to 7s. 6d.; the share list having been completed, a meeting has been called for Jan. 22, to make arrangements for commencing operations.

There has been a very large business transacted on the Stock Exchange during the week in mineshares, Brazilian descriptions again attracting attention, and gold shares generally being in demand. The better class of home mines, such as Great Laxey, West Chiverton, East Caradon, West Seton, Devon Great Consols, &c., have also been enquired for, and in several instances a good advance in price has been established, the more healthy tone of the market for the metals of tin, copper, and lead assisting prices. Taquaril shares have been largely dealt in, and have risen to 7s., 9s. prem.; the reports from the mine are of the most satisfactory character. Large investments by returned miners from Brazil have been recently made in the shares. Further advices are expected by the French packet, due on Tuesday next. Don Pedro shares have advanced to 3½, 3¾ prem.; Anglo-Brazilian, par to 1-16th prem.; General Brazilian, 3s. 6d. to 4s. 6d. prem. Chontales are flat at 1½ to 2. Sao Vicente, ½ to ¾ prem., and in good demand. St. John del Reys are still dull, at 15½ to 16. Port Phillip, 113-16ths to 115-16ths; a dividend of 1s. 6d. per share has been declared, and shares are steady at quotations. Cape Coppers in good demand, at 13 to 13½. Great Laxey's are rather firmer, at 19 to 19½. Great Vor, 10½ to 11. Prince of Wales, after falling to 22s., rallied to 15s., and close 22s. to 23s. East Caradon have risen to 9, 9½, and are favourably looked on. Marke Valley, 9 to 9½, cum div.; the mine is looking well. West Chiverton, 58 to 60; Chiverton, 3½ to 3¾. West Seton good, at about 200. Glean Alun, 12s. 6d. to 13s. 6d.

IRISH MINE SHARE MARKET.—We have had a fair amount of business done in mining shares since Saturday last, chiefly induced by considerable fluctuations in the shares of the Mining Company of Ireland, which at first further improved from 107. 17s. 6d., last week's closing price, to about 127. sellers, making a total rise since the great decline on the 2d inst. to 97. 15s. of fully 27. 2s. 6d. per share (77. paid). Since reaching 127, they were again rather freely supplied for sale, and receded to 117. 10s., and finally to 117; closing, however, with a tendency to a fresh recovery at an advance of 5s., or 117. 5s. As is usual on our market, Wicklow Copper shares suffered a slight check when the shares of the Mining Company of Ireland were in the ascendant; and, consequently, declined 6s. per share, which attracted purchasers, and induced not only a rally, but a rise to 117. 15s. per share (27. 10s. paid) from 117. 10s., the price previously quoted. Connors shares have again been dealt in at 4s. Killakee Slate Quarry has been dealt in at 16s. to 16s. 3d., being a fall of 2s. 6d. per share. Cape Copper shares commanded a daily market at 137. 5s., and have just gone up to 137. 7s. 6d. and 137. 10s. General Mining Company for Ireland shares are too much neglected, considering their low quotation when last purchased, and the company's fair prospects. On Saturday last, in pursuance of a requisition by shareholders, an extraordinary general meeting of the Connors Mining Company was held, "calling on the directors to take such steps as they may be advised by counsel to recover from the former board of directors of the company such sum or sums of money as may appear to have been improperly drawn, misapplied, or lost through their neglect," &c., which resulted in a resolution, *nem con.*, "that a committee of five shareholders be elected to carry out whatever legal proceedings may be advised in respect to the loss sustained in consequence of the former directors' neglect of the affairs of this company," and Messrs. John Mulvaney, John Kennedy, Thomas Bunker, Thomas Vance, and Marcus Hughes were elected as such committee.

At the Mining Company of Ireland meeting (Sir R. Kane presiding) the report did not present many satisfactory features. In the Knockmahon Mines there was a diminution of produce of 105 tons, and in the copper market a further depression, resulting in a loss of 448s. There were set-offs in other branches, but on the whole a loss amounting to 1800l. on the transactions of the half-year. The Chairman, in the course of his statement, referred to a transac-

tion which has caused considerable dissatisfaction. Some time ago Mr. Purley the owner of the Berhaven Mines, expressed a desire to part with them, and offered them to this company. Two competent mining captains and the secretary were sent down to report upon the value of the property, and a favourable account was returned. A sum of 100,000l. was required for the purchase. Some hesitation ensued, the amount being large, and the board unwilling to act in a hurry without the sanction of the proprietors. It was at length proposed that the board should not, as representing the company, make any offer for the mines but that some members of the board should purchase the property in their own names. Some gentlemen came forward, and the secretary was ordered to put himself into communication with them. Negotiations were commenced at the end of April, and there was no further record of the matter until August. Meanwhile they began to get dissatisfied with the secretary, who thereupon tendered his resignation. They refused to accept it until he answered certain questions. It was then discovered that the Berhaven Mines had been purchased by the late secretary and some other gentlemen, including some of the directors, and that they not only paid the full price asked, but 25,000l. to the persons who had been the agents in effecting the purchase, which was found to be more valuable than they had been led to believe. The result is the filing of a bill in equity to transfer the contract to the company.

THE NORTH STAR GOLD MINING COMPANY, with a capital of 225,000l. in shares of 10l. each, has been incorporated under the Companies Acts, for the purpose of working certain mines in Nevada, about 60 miles from Sacramento, and 12 miles from the Central Pacific Railroad. The mines are now, and have been for some years, in successful operation, and have since their commencement provided the capital requisite for their own development, including all necessary outlay for machinery, plant, &c., and returned more than 125,000l. to their proprietors. The average yield of gold is from 1½ to 1¾ oz. to the ton of quartz, whilst the total expenses of mining and extraction do not exceed 3l. 2s. 6d. per ton. The purchase-money is fixed at \$1,000,000, or 200,000l., one-fourth of which is to be paid in cash, and the remainder in fully paid shares of the company. The property is capable of being developed on a much larger scale than at present, and the yield of gold might be at once increased by the erection of additional stamps heads—there are at present only 24. The property has been carefully inspected and reported upon by Prof. Silliman, the highest authority in the United States, and very encouraging reports have likewise been made by Mr. J. A. Phillips, Mr. John Petherick, and others well known in this country, whilst Mr. David Forbes, F.R.S., fully confirms the statement of Mr. Coulter, the acting vendor of the mines. The directors, brokers, solicitors, and other officers of the company, enjoy a high reputation in commercial circles; and, altogether, the undertaking must be regarded as having been introduced under the most favourable auspices. The prospectus will be found in another column of this day's Journal.

At East Pool Mine meeting, on Monday, the accounts for October and November showed a credit balance of 672l. A dividend of 640l. (5l. per share) was declared. [The agents' report is among the Mining Correspondence.]

At Cwm Erfin Mine meeting, on Dec. 16, a dividend of 433l. 10s. (10s. per share) was declared.

At Bronfloyd meeting, on Monday (Mr. Henry Hutton in the chair), the accounts of which were given on Monday (Jan. 2), were passed, and from the balance of 1239l. a quarterly dividend of 10s. per share, being 16 2/3ths per cent. per annum was declared, payable on the Jan. 30. A gratuity of 10l. was unanimously voted to Capt. Kemp, as recommended; and the retiring directors and auditor were severally re-elected.

At Marke Valley meeting a dividend of 5s. per share was declared, and a balance of 2870l. carried forward.

At East Caradon Mine meeting, on Wednesday (Mr. R. W. Childs in the chair), the accounts for the three months ending November showed a credit balance of 1959, 16s. 9d. Capt. John Truscott reported that he considers the chances of success for the future of a very encouraging character. Since the meeting information has been received from the mine that Child's lode has been reached at the 90, and is worth, for the 2 ft. cut into, 12½ to 15½ per fm.

At Llywernog annual meeting, on Monday (Mr. Alexander Bridge in the chair), the accounts were passed, showing a balance of assets available for the prosecution of the undertaking of 2651, 16s. A call of 10s. per share was made, and a resolution passed to issue *pro rata* the 90 unappropriated shares.

At the Penhale Wheal Vor meeting, yesterday (Mr. Holroyd in the chair), the accounts showed a balance of liabilities over assets of 1104l. 6s. 8d. A call of 10s. per share was made. Details in another column.

At the Bryn-y-Owen Colliery Company (Limited) meeting, on Tuesday, it was resolved unanimously that Mr. Henry Thomas be appointed liquidator for winding-up the affairs of the company, in the place of Mr. John Phillips, deceased.

At the Royal Copper Mines of Cobro special meeting, on Wednesday (Mr. Pascoe C. Glyn in the chair), the resolutions passed at the special general meeting, held on Dec. 23 last, to wind-up the company and appoint liquidators were read, and it was resolved that the same be confirmed; and it was further resolved that in the winding-up of the company it was desirable that the winding-up should be subject to the supervision of the Court. The thanks of the meeting were then given to the Chairman and directors.

At the Val Antigua Gold Mining Company adjourned meeting (Mr. Fish in the chair) it was stated that advantage had been taken of the presence in Italy of Mr. Arthur Dean, who had thoroughly inspected the mines, and the report which he had prepared was now before them. The uncalled capital amounted to 10s. per share (10,000l.), and the unpaid calls amounted to 2500l., so that the total assets were 12,500l., against which there were liabilities of about 2000l. Mr. Dean had stated in his report that by the expenditure of 2000l. per annum for two years the mine could be placed in a position by which Mr. Dean computed profits would be realised. In addition to this, there would be a ordinary mine cost, which might be estimated at about 1000l. per annum; but Mr. Dean was of opinion that on the expiration of the first year from the present time such a stage of development would have been arrived at as to enable them to determine more conclusively as to whether the operations were likely to be successful. After carefully considering the matter, the directors had come to the unanimous opinion that the operations should be continued, in accordance with Mr. Dean's recommendations, and each member of the board held a very large stake in the company—amounting in the whole to one-fourth of the entire capital—he need hardly say that their determination had not been arrived at without the most careful consideration. As far as the directors were concerned, they were perfectly willing to allow their remuneration to depend upon the result of the development. Mr. Dean explained at some length the position and prospects of the mines. Having referred to the leading characteristics of the several lodes, he stated that at the No. 1 Mine there were three parallel lodes, called the Nos. 1, 2, and 4 lodes, which were intersected near to the surface by the No. 3 lode, which dipped in the opposite direction. Of these lodes only one had been worked upon at the No. 1 Mine, and that was formerly rich from the surface downwards, but had not been proved to be rich at a greater depth than 100 ft. under the adit. The No. 2 lode was tried in the No. 2 Mine, a few hundred yards further south, and was there turning out well; therefore, he recommended cross-cutting to the parallel lodes, near to the surface, to try them, and from the parity of circumstances, there was a strong probability of their being found to be as good as the No. 1 lode had been superficially. He had a good opinion of the No. 2 Mine, and strongly recommended the prosecution to 30 fms. deeper. He considered that the general prospects of the enterprise were sufficiently good to warrant the expenditure referred to in his report. After some discussion the report and balance-sheet were received and adopted; and a vote of thanks was passed to the Chairman and directors, which terminated the proceedings.

At the Victoria (London) Mining Company meeting, to be held on Thursday, the directors' report will regret that the operations of the company have not during the last year been more successful. The total sales for all investments, which have since now opened an account to the company, amounts to 27,937, 13s. 1d. The dividends received in the colony, and profit on Winter's freehold shares, amount to 2537, 4s. 6d. There has also been received 244l. on capital account on winding-up of Clunes Alluvial and North Grenville Companies. The company has—assets, 502l. 10s. 3d.; liabilities (exclusive of those in respect of possible calls on investments), 1504l.; at credit of capital account, and out of which calls would be met, 1267, 9s. 5d.; and no reserve fund. The board regret that they do not feel justified in recommending at present the declaration of a dividend, but hope to be enabled to do so at the half-yearly meeting in July.

At the Nerbudda Coal and Iron Company meeting, on Thursday (Mr. Henry Hayman in the chair), the special resolution, for reducing the denomination of the shares from 20l. with 6d. paid to 1l. shares with 6d. paid, was negatived, the majority of votes, but not the necessary three-fourths, being in favour of the change. The Chairman forthwith resigned his seat at the board, remarking that it was the first time he had been defeated on a question of policy. From the exertions Mr. Hayman has ever made on behalf of the company, his resignation will be regretted by a very large proportion of the shareholders.

SMOKELESS AND SUPERHEATING STEAM-BOILER.—Messrs. Andrews Brothers, of Pittsburgh, U.S., are at present manufacturing an improved steam-boiler, in which the fire-place occupies the entire horizontal area, with the exception of the narrow water spaces by which it is surrounded. The side and back outside plates are extended downward sufficiently to leave a space under the grate for an ash-pit, and for the admission of air from the front. In the front of the boiler is the door for supplying the fuel, having its lower side nearly on a level with the top of the grate surface. It is made double, and perforated for the admission of air above the grate; and the quantity admitted may be graduated by a slide. At the opposite end is an opening through the water space, as near the arch of the fire-place as it can be conveniently placed, communicating with the combustion chamber formed by the back breaching, which covers and connects this opening and the back end of the tubes. The tubes pass through the boiler in the water space above the crown-sheet, and open into another breaching on the front. Above these tubes, and, of course, above the water level, in the steam-space is an additional set of tubes for superheating the steam, by passing the heated gases from the front breaching through them, before reaching the chimney, instead of allowing them to escape direct. In the bottom of the back breaching is an opening for the admission of air, which closes with a door or slide, by which the amount of air admitted is gradu-

ated according to the kind of fuel that is used. In the back breaching, opposite the opening from the fire-place, and between it and the back end, is placed an iron diaphragm-plate for the flame to impinge upon as it comes from the fire-place, which saves the back of the breaching from the action of the intense heat at that point, and serves as a heater to raise the temperature of the air entering through the openings below and passing over its back surface, before it comes into contact with the gas from the fire-place. The water-legs are braced and connected in the usual manner by screw-braces or socket bolts, and the crown-sheet and shell are connected and stayed by braces radiating from the crown-sheet, and the sides of the shell by braces passing from side to side, above, below, and between the tubes. The ends, above the tubes, are connected by braces passing through the length of the boiler. The back breaching is made of two thicknesses of sheet-iron, and the space between them is filled with calcined plaster of Paris, to prevent the radiation of heat. The portion opposite the tube ends forms a door, which swings down for the convenience of cleaning the tubes; and any deposit coming from them is discharged through the air opening below, and in the front breaching through an opening in the bottom, closed by a slide, which also serves as a damper to check the draught.

## TO CAPITALISTS.

THE OWNERS of a valuable GOLD and SILVER MINE are prepared to TREAT for a SHARE in the undertaking on liberal terms. The mine is proved, by the workings in the neighbouring mine, to yield over £20 per ton. As the lode is over 100 feet wide, the mine is capable of turning out 150 tons per day. No shafts being required, the outlay will not be great. Apply, by letter, to Mr. E. DAVIES, 34, Barnard-street, Russell-square.

A FIRST-CLASS INVESTMENT.—SHAREHOLDERS in RAILWAY, BANKING, and other COMPANIES desirous of joining in an undertaking which is now making £6000 net profit on a small outlay, and which may be increased considerably, can have full particulars and "Guide" on remitting a Post-office Order for 5s. (to cover expenses) to—Messrs. DUNCAN and SON, 6, Warwick-court, Gray's Inn, London. N.B.—No application received after the 29th instant.

A GENTLEMAN, thoroughly conversant with MINING and the PRACTICAL MANAGEMENT of the varied CLASSES of WORKMEN connected therewith, DESIRES an APPOINTMENT as CONFIDENTIAL GENERAL MANAGER of an EXTENSIVE COLLIERY or IRON MINES, or the DEVELOPMENT of FRESH GROUND, where an investment of £500 to £600, together with high-class certified antecedents of experience, ability, and energy, moral integrity, and business habits, &c., would meet with appreciative remuneration. Address, "Engineer," care of Mr. G. Vickers, publisher, Angel-co urt, London

THE ADVERTISER, who has had some years' practical experience in the ANALYTICAL TREATMENT of ORES, especially ZINC, and who has also been engaged in the ACTIVE MANAGEMENT of WORKS, DESIRES a RE-ENGAGEMENT. The highest references. Apply, by letter, to "M. and C.," care of J. B. Davies, Esq., Neath, Glamorganshire.

WANTED, by a Young Man (aged 23), a SITUATION as ASSISTANT MANAGER and BOOKKEEPER at a Mine. Has had five years' experience. Would have no objection to go abroad. Address, "A.B.," Post Office, Mold.

WANTED,—A CONDENSING PUMPING ENGINE, on the Cornish principle, of from 60 to 80-horse power, with BOILERS, complete. Full particulars, as to size of piston, length of stroke, price, &c., and distance from railway station, to be forwarded to Capt. J. KITTO, Belle Vue, Shrewsbury, not later than Monday, the 25th January inst.

WANTED,—A 70-inch cylinder STEAM PUMPING-ENGINE, with TWO BOILERS of 10 or 11 tons each, fittings, &c., complete. Must be in first-class order and condition. State full particulars, situation, and price of same, to J. H. MURCHISON, Esq., 8, Austinfriars, London, E.C.

## COLLIERY PLANT.

WANTED, TO PURCHASE, a SECONDHAND PUMPING and WINDING ENGINE, of 50-horse power; also a WINDING ENGINE of 20-horse power, with 50 fathoms of 8-inch pit work, cages, pulleys, &c. Apply, UPPER ELBE COLLIERY COMPANY (Limited), 12, North-buildings, Broad-street Terminus, London.

ON SALE,—An EXCELLENT SLATE QUARRY, called the WAUNFAWR SLATE QUARRY, situated near HARLEIGH, NORTH WALES. The slates are similar in quality, colour, grain, and durability to the Festiniog slates. For particulars, apply to Mr. WALTER DAVIES, Bethanla, Festiniog, North Wales.

WILLIAM WILSON, LILYBANK BOILER WORKS, GLASGOW, MANUFACTURES STEAM-BOILERS, of SPECIAL GOOD QUALITY, and FROM DESIGNS FOR PRODUCING GREATEST SAFETY, DURABILITY, and ECONOMY IN FUEL. Every boiler subjected to hydraulic test, warranted tight before leaving the works, and delivered at any railway station or shipping-port. Specifications, with drawings, estimates, and references furnished on application to above address.

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MESSRS. NICHOLLS, MATHEWS, AND CO. have FOR SALE ENGINES of VARIOUS SORTS and SIZES, AND SEVERAL GOOD TEN TON BOILERS. All are in excellent condition, and well worthy the attention of purchasers. Also, a WATER WHEEL, 35 ft. diameter, 3 ft. 2 in. breast, with iron axle, complete; and one 12 head STAMPS, complete. Full particulars may be obtained by applying to Messrs. NICHOLLS, MATHEWS and Co., Tavistock Foundry, Tavistock.

## Geology.—King's College, London.

PROF. TENNANT, F.G.S., WILL COMMENCE a COURSE of LECTURES ON GEOLOGY on FRIDAY, January 22, at Nine a.m. They will be continued on each succeeding WEDNESDAY and FRIDAY at the same hour. A SHORTER COURSE will be given on THURSDAY evenings, from Eight to Nine; first lecture, January 21. Text book, Lyell's Elements of Geology. Prof. TENNANT accompanies his students to the Public Museums, and to places of Geological interest in the country. He gives PRIVATE INSTRUCTION in MINERALOGY and GEOLOGY at his residence, 149, Strand, W.C.

## LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Dec. 31	Ile of Islay	40	£13 7 6	Shield and Dinning.
—	ditto	10	13 0 0	ditto
Jan. 2	Van Mines	180	13 6 0	Panther Lead Co.
8	Great Laxey	100	22 5 6	Runcorn Company.
9	Frank Mills	110	18 5 6	Trefry's Executors.
—	ditto	100	11 0 0	Stock and Co.
11	Brynpostig	30	11 0 0	ditto
—	Glogfawr	60	13 14 0	Sims, Williams, & Co.
—	Frongoch	200	11 18 0	ditto
—	West Frongoch	40	11 8 0	Walker, Parker, & Co.
—	Graiggoch	45	11 18 0	Sims, Williams, & Co.
—	East Darren	75	16 1 6	Runcorn Company.
—	Goginan	12½	17 5 0	Weston & Collingborn
—	ditto	12½	17 5 0	Sheldon, Bush, & Co.
—	Cwm Erfin	20	15 0 0	Sims, Williams, & Co.
—	ditto	30	15 15 6	Weston & Collingborn
14	Talargoch	46	13 11 0	A. Eytton.
—	ditto	68	13 18 6	ditto
—	ditto	68	13 18 6	Walker, Parker, & Co.
—	Holywell Level	65	12 0 0	A. Eytton.
—	Bryn Gwlog	20	12 15 6	Walker, Parker, & Co.
—	Trelogan	20	12 10 0	A. Eytton.
—	Deep Level	25	12 8 6	Walker, Parker, & Co.
—	Sir Edward	5	13 3 6	ditto
—	ditto	3	10 16 0	ditto
—	North Hendre	5	12 16 6	ditto
—	ditto	5	13 0 6	A. Eytton.
—	Pennant	5	12 1 6	Walker, Parker, & Co.
—	Great Rhosesmor	5	9 12 6	ditto
—	Wagstaff	12	11 1 6	A. Eytton.
—	North Westminster	6	11 9 6	Walker, Parker, & Co.
—	North Henblas	6	11 8 6	ditto
—	ditto	2	5 10 0	ditto
—	Hafotty	6	12 6 6	ditto
—	Perryfordbedw	13	11 16 6	ditto

## BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Jan. 11	Brynpostig	40	£2 18 6	H. Southern.

## BLACK TIN.

Date.	Mine.	Ts. c. q. lbs.	Price p. ton.	Amount.	Purchasers.
Dec. 31	Proser United	4 4 3 9	£23 10 0	£ 357 11 10	R. B. Mitchell
—	ditto	1 10 3 0	60 0 0	76 17 6	ditto

## COPPER ORES.

NO SALE on Thursday last, January 14. Copper ores for sale at the Royal Hotel, Truro, on Thursday next—Mines and Parcels.—Devon Great Consols 1407—Marke Valley 500—Wheal Crellako 230—West Maria and Fortescue 203—East Caradon 105—Bedford United 180—Kelly Bray 150—Gannislake (Chiters) 116—Prince of Wales 112—Wheal Friendship 109—Bampfylde 57—East Russell 50—Belstone 12.—Total, 3322 tons. Copper ores for sale at Tabb's Hotel, Redruth, on Thursday week.—Mines and parcels.—Clifford 604—South Caradon 832—Glasgow Caradon 285—Poldice 246—Phoenix 199—North Treskerby 164—Craddock Moor 85—West Caradon 82—Wheal Rose 75—New Treleigh 57—Tywarthall 12.—Total, 3241 tons.



A LARGE AMOUNT of MONEY being EXPENDED in ADVERTISING in WORTHLESS PUBLICATIONS, C. H. MAY will be HAPPY to AFFORD INFORMATION to ADVERTISERS in the SELECTION of the BEST and MOST INFLUENTIAL.

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### Notices to Correspondents.

\* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

**BITUMINOUS COAL.**—Could any of your readers inform me of any coal in Great Britain with the following proportions in it:—45 per cent. crude oil, 40 per cent. coke, 14 per cent. paraffin, 1/2 per cent. ammoniacal water = 100. INQUIRER.

**NEW GREAT CONSOLS.**—Some months since Mr. J. Y. Watson, F.G.S., in a letter which appeared in the *Mining Journal*, after expressing a very favourable opinion of this property, stated it to be his intention, during a mining tour he was about to take, to visit New Great Consols, and that he would communicate the result of his visit to the shareholders through the columns of the Journal. May I ask if such communication has yet appeared, and, if so, at what date?—A SHAREHOLDER.

**CHONTALES.**—It seems a pity that the directors do not issue some official statement contradictory of the many damaging statements set on foot by the "bears"—statements which, if left uncontradicted, cannot fail to warp the judgments of the most consistent shareholders.—ONE INTERESTED.

**SOUTH WHEAL CROFTY.**—Like other readers of the Journal, I am much disappointed at seeing no reports in the *Mining Correspondence* respecting this mine, in which I hold shares. The only tidings I have seen of it in the Journal are where it is stated that 28500 lb. worth of copper ore were sold the last three months. As the mine has recently entered the Dividend List, and is expected to pay handsomely, surely it is not too much to ask the agents that the shareholders should be informed now and then through the Journal how the mine is progressing, otherwise they can have no information respecting it during the interval of the four months between its general meetings.—A. C. D.

**MINERA MINING COMPANY.**—In last week's Journal the price obtained for the lot of 47 tons of blende, purchased by Mr. Southern, was stated as 21. 5s. 6d.—It should have been 31. 5s. 6d.; and in the List of Mining Dividends during the year 1868 the amount for this company was stated as 27,000l., instead of 36,000l. The quarterly payments were in February, 9000l.; May, 9000l.; August, 10,800l.; and November, 7900l.—making 20s. per share, or 80 per cent. on the share capital during the year 1868.

**PRINCE OF WALES MINE.**—Seeing that these shares continue to decline in market value, although I am perfectly aware that for the time the market, so to speak, is in the hands of a syndicate formed for the purpose of knocking down the price, I would respectfully suggest to the committee the desirability of having the mine inspected by some acknowledged authority, whose report would be reassuring to the shareholders. At present the anti-shareholders have it all their own way, but I think the time has arrived, and I speak as a shareholder, that those interested in the property should have their "inquiries." It is true that the very fluctuating character of the price, particularly in the 55 fm. level, affords ample opportunities to the operators to play out successfully their profitable game of "ducks and drakes;" but this is the strongest reason that can possibly be urged in favour of bona fide shareholders availing themselves of the undue depression and inflation to which these shares are subjected. I hope my suggestion as to an accredited and disinterested opinion being obtained will receive the attention of the committee, and I cannot help thinking that as our purser, Mr. Jehu Hitchins—whom all know to be an authority of no mean order—has recently visited the mine, it would have been at least satisfactory to the shareholders had the result of his inspection been made known.—A SHAREHOLDER.

## THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, JANUARY 16, 1869.

### MINING IN SOUTH STAFFORDSHIRE.

The account which we give in the Supplement to this week's Journal of what took place at Dudley, on Monday, in connection with the second annual meeting of the Incorporated Association of Mine Agents of South Staffordshire and East Worcestershire will be read with interest by those connected with collieries in other districts as well as South Staffordshire. Attention has recently been directed with much conspicuousness to that part of the kingdom, and statements have been made with much prominence which have not been calculated to increase the estimate in which it is held on account of the scientific attainments peculiar to certain classes of the coal winners there. On that account the meeting on Monday possesses more than usual significance. Like all old mining districts, South Staffordshire has had to suffer from precedents not of a class best suited to the practice of economy; and its honeycombed character has led to the splitting up of the field into small takings, by which a further hindrance to its development upon the most approved methods has resulted. It is, however, evident that the modern mining engineers of that district are not content to lag behind in the march of progress.

The intensely appreciative interest which was displayed in every step of the explanation by Mr. BIDDER of his very valuable machine for the breaking down of coal was conclusive of the promptness with which they were able to recognise the points of merit which the machine possessed, and the gratification which its existence evoked was proof of their desire that improved apparatus should be placed within their reach. In this respect the men of South Staffordshire are not behind their fellows in other parts of the kingdom. We learn that during the Christmas holidays as many as 100 persons interested in the working of mines examined Mr. BIDDER's machine at the Institute of Civil Engineers. The managers of the Staffordshire Association are to be congratulated upon the boldness of the effort which resulted in their securing the use of the machine whilst it was still before the Civil Engineers. The Engineers acted kindly, and like true lovers of science, in permitting it to be taken to Dudley, even for so short a period as a day, and in sanctioning the delivery by Mr. BIDDER of his paper in illustration of the invention. An official acknowledgment of the consideration alike of the engineers and of Mr. BIDDER was ordered by the Mining Engineers at the close of their meeting. It was accompanied by the expression of the belief of the Association that the machine would prove of very great value to the mineral interests of the world, as well as in preventing a deterioration in the worth of the product as in the saving of life.

The wisdom of management was again conspicuous in the character of the paper which was the second in attractiveness and importance. It is impossible to resist the conclusions which thoughtful men amongst our mine inspectors, mine managers, and meteorologists have arrived at respecting the joint barometrical and thermometrical influence upon the ventilation of our fossil fuel mines. The paper jointly contributed by Mr. PLANT, of Birmingham, and Mr. HENRY JOHNSON, the hon. secretary of the Association, upon this subject, was well-timed and impressive. Mr. JOHNSON had, in a very brief time, prepared legible diagrams, showing, on a large scale, the simultaneous fall in the barometer, and the rise in the thermometer, which occurred at the time of six of the explosions dilated upon in the paper. During his investigation of the data which Mr. PLANT had accumulated, the hon. secretary had, he told the association, observed the same invariable indication of danger in connection with other explosions than those which he had sketched. He alluded to a falling barometer and a rising thermometer. These instruments are in use in some of the pits in South Staffordshire and East Worcestershire; but they are not generally to be found there. The directors of the association, in order to assist those of the members who are not using these tell-tales to note the atmospheric fluctuations, have resolved to distribute to all the members a useful little book, with the title of "How to Use the Barometer," which the Rev. R. TYAS, F.M.S., has got out. Connected with it are diagrams on which the possessors may note their own observations, and so keep constantly before them the information which both instruments jointly furnish. The manager of this and other similar associations, which are only young in years, would do well to use their influence with the proprietors of the local daily papers in their respective districts, with a view to the publication, every morning, of a meteorological report, somewhat after the fashion of that in the *Times*. From such information men might construct their own diagrams, and an interest in

the work would be invoked which would soon lead to the personal possession of the instruments. Let thought and deliberation be inspired throughout the different ranks of our mining population, and, however produced, it will prove most efficient in economical, industrial, and in humane efforts below ground. Whilst upon this point, let us express our satisfaction that the directors have determined that the association shall possess the highly valuable Transactions of the North of England Institute. For these the association will subscribe, and as often as they appear they will be circulated amongst the members.

The other two papers read both possess that trace of worth which is inseparable from all valuable communications of their kind—they are impregnated with encouragement. Mr. BLAKEMORE assures the world that this nation has yet an abundant reserve of fuel, and that his own district in particular has in it many long years of life—a life which may be measured, others equally informed believe, by as long a time as that which has elapsed since it first appeared amongst the coal and iron-producing centres of this realm. How long that is since may be inferred from the interesting relics of the "old men," which were shown to the "moderns" at the meeting. Mr. SKIDMORE has no less confidence with relation to the future supply of the clay, which is a great item in the wealth of East Worcestershire.

Another pleasing feature which characterised the meeting was the absence of all littleness. There was no trace of petty rivalries—no seeking after office, all were working together with one common end; each had confidence in the other, and everyone combined to render honour to whom honour is due. The spontaneity of the feeling which desired to find expression in the making of a gift to the hon. secretary must have been most gratifying to that officer. As indicative of the unhesitating confidence which the whole Association, as represented at the meeting, feel in him, nothing could be more conclusive; the fear seemed to be, not that the directors would spend too much money in marking the sense which the 100 mining engineers entertain of Mr. JOHNSON's services, but that they might not be as liberal as the members desired. The services which Mr. JOHNSON has rendered to the men of his own order would not seem to be confined to what he has done as secretary of the Incorporated Association. Other aid was recognised at the close of 1864, when they presented him with one of TROUGHTON and SIM's gravat levels, worth 25l., accompanied with a purse of 50l., all expressive "of their regard and esteem, and in testimony of services rendered to the mine agents of South Staffordshire." During the two years that the Association has been incorporated it has effected much good, and has given an impetus to professional study, which was not before so readily to be observed. We have one suggestion to offer for the consideration of the directors. The object of their combination is, we presume, the improvement of the mining of South Staffordshire and East Worcestershire. Now, it is notorious that very much in this direction depends upon what the butties or chartermasters do in their peculiar departments; and it is also a fact that owing to the small takings, before noticed, these men have oftentimes to undertake responsibilities which elsewhere devolve upon men of higher trade education. The butties, therefore, ought to be able to avail themselves of the advantages of the Association. These at present are confined to mine agents and mining engineers, but why not extend them to the butties? Our suggestion is that the butties should be declared eligible for membership. If there are any good men amongst them the Association would draw them out, and everyone of them would have an opportunity of increasing his trade value. The mining engineer under whom he works might then expect his orders carried out by a more intelligent overlooker, and, therefore, with less inaccuracy; and the colliery proprietor would be benefited in the greater care which would be taken of his property. We observe that a similar course to that which we now recommend is likely to be taken by the Mining Engineers' Associations of Yorkshire and Lancashire, whom in this matter, as in some others, the Staffordshire men would do well to imitate. Such an accident as that which occurred at the Rainford Colliery, described in another column, and to be more particularly noticed at the close of the inquest upon the deceased in that case, may show how beneficial such action by the mining engineers as we now recommend may hereafter prove. In conclusion, the Association appears to us to merit somewhat more support than it gets from the employers. Of these only a few have as yet given their agents the practical sympathy of joining them as honorary members. It may well be hoped that in the ensuing year the number of honorary members of this class will be increased. We bid the Mining Agents' Association of South Staffordshire and East Worcestershire "God speed." The co-operation which institutions of longer standing and greater mark are ready to show them is noticeable in the conduct of the Civil Engineers in the matter of Mr. BIDDER's machine. By this encouragement, and their own past success, let them be stimulated to aim high, and the good results will be signal.

### MODERN IRONMAKING.

The evidence presented at the end of our remarks last week on "The Coal and Iron Trades," of the progress of the iron industry of the United Kingdom, is very significant. At no previous time in the history of that craft was there displayed so much attention as now to the adaptation of improved machinery to the manufacture of iron, as well into its crude state from the ore as into the finished article from the crude metal. The fact merits attention at our hands, at a moment when we find the relative capabilities of our own and other countries in this branch of industry occupying so great a space in the columns of non-professional newspapers, and when such men as Dr. PERCY and Mr. ISAAC LOWTHIAN BELL come forward simultaneously in defence of the continued pre-eminence of the birthplace of the iron trade. It is notorious that the leading continental establishments, wherever they have excelled us, have succeeded through the excellence of their machinery. This has resulted, not from the fact that they are better ironmakers, but from the circumstance that they have begun at the point at which, after long years almost of groping, without much scientific light, they found the British ironmaker had arrived; at a time, furthermore, when science was coming to the aid of the ironmaker here, but which, owing to his previous outlays, he could not avail himself of to the extent that would have been the case if he, too, had been commencing *de novo*. Still in all cases in which men started in the trade at about the same time, in this country, similar evidences of proficiency mark the mechanical arrangements. This, together with what their continental opponents have done, combined with a necessity for meeting the advancing wants of the age, is compelling firms who have been a long time established to take care that in every alteration or addition they are guided by modern experience.

There are few persons having a knowledge of the iron trade but are aware of the great serviceableness of the Universal Mill, an invention of British origin, but of continental application. Foremost of the firms by whom this machinery has been used are the French ironmakers, Messrs. PETIN, GAUDET, and Co. The Universal Mill, which has been made in South Staffordshire—a part of the kingdom from which the bulk of iron works' machinery goes, as well to the continental as to home establishments—is not intended, in the first place, for the rolling of the massive beams of which so much has been made by writers upon the Paris Exposition (who have but a partial knowledge of what is required at home, and, therefore, of what it would be profitable for an ironmaster to make), but for the production of those goods for which there is a demand. So soon as there is a want of other articles which can be best turned out by such machinery, then, as we have not seldom intimated in the *Mining Journal*, the British ironmaster will show himself possessed of sufficient enterprise to send them into the market.

It is still more satisfactory to find that proprietors of finished iron works are fast abandoning the custom of making their own machine castings, as also of laying down mills under the direction of other than mechanical engineers of foremost standing in that department of their profession. The economy of what would, by some, be regarded as a heavy first cost, is becoming increasingly apparent as the result of the working of machinery of that class is bruited. Owing mostly to the defects in the laying down of the machinery chiefly in use in the old districts, gearing and engines have to be used of a weight and power disproportionately massive to the work to be done. Hence results an increase in cost in every item of working

expenditure. Then, the loss from stoppages, consequent upon the breaking down of such machinery, is a very serious item in the maintenance charges. Our ironmasters are now, more than at any previous time, the customers of our leading machinist firms; and the makers of iron-rolling as well as iron-smelting apparatus of the very best class were scarcely ever better off for work than they are at this moment. Gearing moulded with an irreproachable adaptation of strength to duty required, and with an interlocking accuracy rarely to be seen, is now in process of construction, which, when it is at work in the mill and forge, will revolve with a noiseless thought to be impossible by men who have passed their lives amidst the intolerable rumbling common in too many iron mills.

Such machinery having been got into general use, we shall no more hear of twists so prodigiously powerful as to snap through a 15-inch shoulder of the shaft of a driving-engine in one of our mills—a cause from which, at this hour, a large portion of one of the finished iron works of this country is standing, and will, of necessity, be for some time standing. Nor shall we hear of one firm having, in its two works, as many as three of its departments at a stand, in one instance three weeks, by reason of breakages; yet this, too, has happened only recently. Less time will now be lost in the changing of rolls; for there will not be the rapid exhaustion of certain mill appliances due to the want of "truth." Example: eight housing pinions a year (which is a common proportion) should not have to be used. To our knowledge, one pair has been down that time, and is likely to remain down some months longer, in well-adjusted first-class mill machinery, now in constant operation.

The effect of the "progress" which our steel makers are displaying has been, we are assured in an influential quarter, to reduce recently the extent of the competition on the part of continental firms in our home market. We hope it may be so; yet very much fear that the falling off in the import of such commodities is due rather to the increased demand at the works of our opponents than to their inability to compete; especially when we learn, as now, that Sir JOHN BROWN and Co. (Limited), though tendering at 484l. for a lot of 693 hammered buffer-pistons for goods trucks, and at 499l. for a similar lot, for a Belgian line, were unsuccessful; and when, further, the Newcastle-on-Tyne Iron and Coal Company tendered at 240,000l., the Butterley Company at 204,000l., Messrs. T. BRASSEY and Co. (Birkenhead) at 198,532l., and Messrs. VIGNOLES (London) at 168,750l. for the construction and erection of a great bridge on the Dutch State Railway, which Messrs. VLESSINGEN and VAN HEEL, of Amsterdam, have undertaken to do for 146,674l. The evidence on such matters, only six months ago, of Mr. C. F. BEYER (of Messrs. BEYER and PEACOCK, of the Gorton Foundry, Manchester), and of Mr. JOHN ROBINSON (engineer of the Atlas Works, in the same city), already noticed in the *Mining Journal*, must not be thrust aside by enquirers after the truth; and only evil can result from indulging in a false trade patriotism. But there can be no doubt that the aid which our British ironmasters are now deriving from the wider application of sound mechanics to the prosecution of their industry will help them to carry with less impediment the heavier cost-of-labour-burden with which, in the race with their continental rivals, they are weighted—for, to the very practical result of reducing our cost of production must every improvement immediately tend, if its adaptation is to be of any real service.

### THE SUPPLY OF COAL TO LONDON BY RAILWAY.

That to the development of the railway system in Great Britain is due in no small degree the opening out of new and extensive coal districts, and the consequent cheapening of so important a product as coal, admits of no question; so that whilst colliery owners have been greatly benefited by the expeditious means afforded them of exporting their mineral, the railway companies have also gained largely by the traffic. The question has now resolved itself into one as to whether the inland coal carried by railway can compete with that sent over sea by the swift screw steamers, which convey the produce of the mines of Durham and Northumberland to London? Up to last year the railways had decidedly the best of their Northern opponents; but the falling off in 1868 of the coal carried by railway has been of such a marked character as to require special notice. One of the principal causes is attributed to the rates charged by the Great Northern from the South Yorkshire district, where there is a house coal of excellent quality, and a great favourite in the London market. Another is the disputes which have occurred in several districts, by which the principal pits were only very partially worked.

Still, with all the drawbacks from strikes, lock-outs, and the limitation of produce by the men preferring short hours, there is something really extraordinary in the proportions which the traffic in minerals to London has assumed within the last 12 or 14 years. At the present time Derbyshire supplies the largest quantity of inland coal, the carriage of which is shared in by several of the leading lines of railway. Clay Cross, from which before the opening of the North Midland line not a ton was sent across the ridge which runs to the road, now sends away something like 600,000 tons annually, and last year sent to London no less than 292,471 tons, against 77,911 tons in 1854. Therefore, although there was a great falling off in the trade to the metropolis last year when compared with 1867, yet, on looking back, we find that the entire quantity of coal carried into London by railway in 1855 was 1,137,835 tons, whilst during the next 10 years the carriage was more than doubled, the returns for 1865 amounting to 2,733,056 tons. The first return given by the Midland, in 1858, showed that in that year it carried to London only 5746 tons, and 10 years later, in 1868, it is credited with 152,737 tons. During the same period all the lines having termini in London increased their carriage to a truly enormous extent, as will be seen from the following figures:

	1855.	1868.
London and North-Western .....	339,656	1,093,735
Great Northern .....	547,602	975,509
Great Eastern .....	145,327	292,501
Great Western .....	80,950	237,222
South Western .....	827	19,950
Total .....	1,114,862	2,568,907

Coming to last year, we find that the Great Northern, principally from the cause previously assigned, did not carry so much as in 1867, nor even so much as in 1865, whilst the London and North-Western also exhibited a very serious decrease, as did also the Great Eastern. The following figures show the actual state of the trade for the two past years:—

	1867.	1868.	Decrease.
London and North-Western .....	1,243,390	1,059,177	184,213
Great Northern .....	1,044,125	938,405	105,720
Great Western .....	425,715	442,450	—
Great Eastern .....	388,432	316,408	72,024
Midland .....	157,246	183,701	—
South-Western .....	22,436	22,781	—
South-Eastern .....	9,555	11,233	—
London and Dover .....	4,324	4,546	—

The large decrease in the tonnage carried by the London and North-Western was partly owing to the dispute which took place in the Wigan district, when several of the principal collieries in that important locality were all but closed. This will be apparent when it is seen that the Wigan Coal and Iron Company sent by the railway named, in 1867, no less than 122,391 tons of coal, whilst last year, owing to the dispute, it only forwarded 63,238 tons. Looking, however, to the vast increase in the quantity of coal carried southwards by rail during the past few years, there is no reason why it should not go on progressing at the same rate for the next decade, more especially should there be any considerable improvement in the iron trade. At the present time the extent of the northern coal fields are well defined, whilst those of Yorkshire and Derby, particularly the former, are as yet unexplored, and, as has been stated by a very high authority, it "must be for the enterprise of 100 years to come to test the extent of the next field of wealth now reposing under that mighty formation—the Magnesian Limestone." The field is now being gradually opened out, and from the unlimited quantity that can be supplied, and with a fair rate by the various lines of railway, there is little doubt but what sea-borne coal will have to give way, as it has already done, to that carried by land.

The Midland Railway, which has now its own rails into London, may be expected to rank with the leading companies, so far as regards mineral carriage to the South. It has the great advantage of being considerably nearer to London than either the Yorkshire or Lancashire coal fields, whilst it has a very good quality of house fire coal—the black shale. That seam runs through the entire coal field,



being the same as the Yorkshire Silkestone, but rather inferior in quality, and is worked at Alfreton, Clay Cross, Staveley, and other places. The Great Eastern will also largely increase its traffic in coal from the facilities afforded by the new depots at Whitechapel, and which will be of considerable benefit to colliery proprietors. Already, we understand, the whole of the arches, 51 in number, have been taken; and, as the company have running powers over the Great Northern, the Manchester, Sheffield, and Lincolnshire, and other lines, it will be a formidable competitor with the principal railways, which have hitherto divided the carriage, and will doubtless obtain its share.

Seeing that there is now every prospect of the carriage rates to London and the South undergoing a thorough change, with a view to a general reduction, the result, there is every reason to believe, will be to the advantage of the public, who always benefit by competition, and also to the inland coalowners; whilst the various companies will have to confine their operations more to the coal districts through which their lines pass, or to which they have the easiest access.

#### MINING, METALS, AND MINERALS—PATENT MATTERS.

BY MICHAEL HENRY.

Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

Mr. W. F. BATHO, of Birmingham, has recently specified a patent for machinery for planing or shaping metals or other materials. He proposes to mount a number of spindles in a framework, by preference horizontally, and radiating to a fixed point in the centre of the frame. All the spindles are driven simultaneously by bevel gearing. Each spindle carries a cutting-tool, similar to the roughing-out drill used in the slot-drilling machine. Each cutter is placed at right-angles to its neighbour. The article to be operated upon is carried between centres, or spindles, supporting vices connected with a top and bottom frame. These frames are attached together by three up-right shafts, which work in bushes in the main frame. This tripod frame receives vertical feed-motion by means of a screw, or rack, driven by gearing. Sometimes a combined rotatory and vertical motion is given to the article operated upon by the cutters, which then form inclined, or spiral, surfaces upon such article.

Mr. DIXON, of Sheffield, proposes, according to his specification, to construct a coupling-link by welding a piece of iron or steel wire into a ring. He superimposes two or more such rings, and heats them to a red heat. He elongates them on each other in this condition, and twists them together by two pins, which, at the same time, form the eyes of the link.

Mr. C. D. ABEL has specified (as a communication from Mr. Pemberton, Pennsylvania) a process for manufacturing alum; according to which he mixes hydrate of alumina with sulphuric acid and water in the requisite atomic proportions necessary to form the neutral, or slightly basic, sulphate of alumina, taking care to use a quantity of water only enough, or but little more than enough, to afford the water of crystallisation required.

Mr. A. PRINCE specifies (as a communication from Mr. Brown, Philadelphia) a method of making metal castings. He claims the application to the wrought metal of a coating of nickel, or other metal having requisite properties of resistance to the effects of molten cast metal in contact with it, thereby protecting wrought metal from the injurious effect of cast metal in contact with it in the moulds.

It may be interesting to inventors to learn that the number of applications for British patents during the year just concluded exceeded very considerably that of any preceding year. The official list shows that no less than 3991 applications for patents have been made. The tabulated comparative statement in the "Inventors' Almanac" shows this to be an increase of 268 over the applications in 1867, of 536 over those in 1866, and of 615 over those in 1865. This is a satisfactory and practical reply to the carping pessimists who some years ago boisterously inveighed against the propriety and popularity of the Patent Law. If a patent was not a boon to the inventor it is singular that no less than 3991 patents should be applied for in one year, an average of nearly 13 per diem.

**SAFETY-CATCH FOR WIRE-ROPE GUIDES.**—Mr. Thomas Pasfield, of Coneygre Colliery, Tipton, has devised an improved catch (applicable when wire-rope conductors are used), which has been in successful application at that colliery for several months. The catch consists of a block, nearly square, through one side of which the wire guide passes, whilst at the other side there is a pin, which carries a plate, one end of which is a grooved segment of a circle, hung eccentrically, and the other a tail, by means of which the groove is pulled off the guide when the winding rope is tight. When the rope slackens, from breakage or otherwise, the grooves tighten on the guide, and prevent the cage falling. There are springs to cause it to act more quickly.

**COAL OIL, &c.**—It may not be generally known to our readers that an Act was passed in July, 1868, which forbids—under a penalty of 5*l.* sterling—the sale of petroleum, paraffin, diamond oil, naphtha, benzole, or other product of rock oil, coal, shale, &c. (giving off an inflammable vapour under 100°), without attaching to the purchaser's vessel a label, stating that it is dangerous to bring a light near it; and any retailer so neglecting to attach a label of the above nature after Feb. 1 will be liable in the penalty of 5*l.*, as above described.

**THE METAL TRADES OF THE UNITED STATES.**—The American School of Mines, to the establishment of which, in connection with the Columbia College, New York, we have several times referred, is progressing most satisfactorily, and the executive have now taken a step which is calculated to prove of great advantage to all connected with the industrial interests of the country. They are using their best efforts to obtain a complete collection of statistics relating to the manufacture of metals throughout the United States; and it is gratifying to find that the circular issued by Prof. Egleston, who so ably fills the chair of Mineralogy and Metallurgy, is being well responded to. Although the Americans are undoubtedly amongst our best customers for metals, no objection can be raised by Englishmen to the collection of the statistics mentioned. They will undoubtedly tend to give a stimulus to the metal trades of the United States by promoting a laudable ambition amongst the manufacturers to take a good position on the list; but, from the beneficial influence this increased energy in the iron trade will have upon the general business of the country, it is unlikely that any fewer orders for metals will reach England than heretofore.

**EXPORTS OF RAILWAY IRON.**—The exports of railway iron in November amounted to 34,611 tons, as compared with 38,966 tons in November, 1867, and 38,474 tons in November, 1866. The figures would not have held up so well in November but for the large exports made to the United States. In the first eleven months of last year the total quantity of railway iron exported was 544,579 tons, as compared with 552,037 tons in the corresponding period of 1867, and 468,615 tons in the corresponding period of 1866. The exports of our railway iron to the United States presented a very large increase to Nov. 30 last year, having footed up to 248,246 tons, as compared with 157,335 tons in the corresponding eleven months of 1867, and 96,814 tons in the corresponding eleven months of 1866. The deliveries of railway iron to Russia last year scarcely sustained, however, the promise of 1867, and the shipments also materially declined last year to British India. They increased slightly to the British American colonies. The value of the railway iron exported in November was 289,189*l.*, as compared with 334,505*l.* in November, 1867, and 336,743*l.* in November, 1866; and in the eleven months ending Nov. 30, last year 4,366,842*l.*, as compared with 4,630,684*l.* in the corresponding period of 1867, and 3,915,641*l.* in that of 1866.

**COMBUSTION OF SMOKE—PRACTICAL REMEDY FOR THE SMOKE NUISANCE.**—At the Association for the Prevention of Steam-Boiler Explosions meeting, on Tuesday, Mr. L. E. Fletcher, the chief engineer, stated that attention having been called to the subject of smoke prevention by the late experiments conducted on this subject at Wigan, by the South Lancashire and Cheshire coalowners, has led this Association to add to its staff the trained stoker who was engaged throughout the whole of the experiments, the object being that he might visit the works of the members, and assist their stokers in introducing a better system of firing. He has now been engaged in

this way for nearly three months, and has compiled a table which shows that he has visited 13 of the members' works, and operated upon 63 boilers, the gross consumption of coal of which has been 1085 tons per week, and 17½ tons per boiler on an average, while the mean rate of combustion per square foot of fire-grate per hour has been 18½ lbs. Under these conditions the average result has been realised of about 12½ minutes of very light smoke, 2½ minutes of brown, and one-third of minute of black per hour, which is certainly very much below the amount emitted from chimneys generally. The conditions under which the trials were made were not by any means the most favourable for success. In some cases the doors had no perforations, in many the area was too limited, while some of the fire-grates were 7 feet in length, which is too long. While, no doubt, more remains to be done to complete this movement, yet it has been seen that much can be accomplished by careful firing alone, coupled with the admission of a little air at the fire-door, which should in all cases be fitted with a suitable sliding grid on the outside, and a perforated box baffle-plate on the inside.

#### ON COAL-GETTING MACHINERY, AS A SUBSTITUTE FOR THE USE OF GUNPOWDER.

Mr. C. J. CHUBB read a paper on this subject at the Institution of Civil Engineers, on Tuesday, in which it was remarked that the improvements now needed in the art and practice of coal mining might be thus specified:—First, to ensure greater safety to the men employed in working; and, secondly, to obtain the coal in better condition, and, by preventing as much as possible the loss arising from waste, to make more fully available all the remaining resources of the coal fields. It was contended that the use of gunpowder and the operation of blasting must be altogether abandoned; and the problem to be solved was what force could be applied which should be equally effective, and at the same time break the coal in a more perfect manner. The author thought more simple and practicable means of getting coal by mechanical power could be devised than the costly, but skillfully contrived, coal-cutting machines. His first idea was to apply wedges, acted upon by hydraulic force, but he was induced to abandon that system, owing to objections to the use of wedges, and to adopt instead an apparatus consisting of twelve plungers, set side by side in a steel bar, which plungers, when acted upon by water from a hydraulic pump, would separate the bar in which they were set from another bar, formed in the shape of a cover upon the plungers. The pressing apparatus was 25 in. long, and it was attached to a hydraulic pump by a tube 2 ft. in length, so that it might be inserted into the coal to a depth of about 3 ft. 6 in. The apparatus, with the cover on, was 4½ in. in diameter. When, by the action of the pump, the plungers had reached their limit of 2½ inches, and further expansion was needed, the plungers were readily brought back to their first position, by opening an escape cock for the water, when a liner could be inserted between the plunger and the cover; and this process could, of course, be repeated. In practice, however, it was found that the first expansion to 2½ in. was more than sufficient. It was stated that the collective area of the plungers was 24 square inches, and, as the pump could exert a pressure of 12 tons on the square inch, a total pressure of 288 tons could be brought to bear on the coal.

This apparatus had been tried in the South Wales district, where the coal was of the most varied description. It was observed that by the present system of blasting it occupied, on an average, two men ten hours to break down and fill into trucks 4 to 5 tons of coal, of which 20 per cent. was "small," and the remainder much shattered. On the other hand, with this apparatus two men could break down 20 tons in one hour, which could be filled, when loosened, at the rate of 10 tons per man per day, the whole of the coal so obtained consisting of large solid pieces. Again, by the present system, in order to break down 500 tons of coal a day, from a "4-ft." seam, a "face" of 600 yards was required, whether as pillar and stall, or as long work; whereas, with this apparatus, the same quantity could be worked from 300 yards of "face." In this way there would be less space requiring to be ventilated, the working operations could be concentrated, and facilities would be afforded for effecting economy in other respects.

**INSTITUTION OF CIVIL ENGINEERS.**—At the meeting on Tuesday evening, Mr. Charles Hutton Gregory, President, in the chair, fourteen candidates were duly elected, including two Members—Mr. W. Anderson, President of the Institution of Civil Engineers of Ireland; and Mr. F. W. Kitson, Leeds; and twelve Associates—Mr. C. James Clarke, Leicester; Mr. E. N. Clifton, East India Avenue; Mr. T. Dyke, Engineer to the Port and Harbour Commissioners of West Hartlepool; Mr. R. M. Greene, Chief Harbour Engineer to the Marine Department of the Imperial Customs Service of China; Mr. Thomas Hennell, Adelphi; Mr. Anthony H. Keener, late Division Engineer on the Union Pacific Railroad; Mr. F. L. O'Callaghan, Executive Engineer, P. W. D. of India; Mr. Wilson Weatherly Phipson, Adelphi; Mr. Lewis William Pritchard, Engineer to the Western Gas Light Company; Mr. Warwick Stevens, Darlington Works, Southwark Bridge-road; Mr. W. Henry Trevelton, Surveyor to the Lewisham District Board of Works; and Mr. Major Vidler, Surveyor and Engineer to the Commissioners of Penvensey Levels.—It was also announced that the following candidates had recently been admitted by the Council *Students* of the Institution—John Addy, John Baumann, John Brunless, Alpin Grant Fowler, Oliver Claude Robson, Robert Sharland, George Stevens, and Joseph John Stiles.

#### REPORT FROM SCOTLAND.

JAN. 13.—There is, no doubt, a substratum of reality in the speculations which are taking place in our pig-iron market, by local brokers, for non-resident operators, in the fact that the present demand for all kinds of railway iron and plant is unprecedented in the history of the last 10 years; and all that is required to render present speculation a reality is the continuation of peace throughout the Continent. From almost every continental country comes a demand for rails, and following it, a further demand for iron for bridges, locomotives, wagons, and all the concomitants of railway apportionment. The present enhanced price of pigs in this market is, undoubtedly, the result of a partial scarcity of warrants, caused by the demand of parties who are becoming holders of stocks for a rise, and who are expecting to reap advantages of a very substantial kind from their present purchases. From the lowest price at the close of Friday's market till to-day there has been an advance of 6*d.* a ton gained, in a strong market, with a very considerable business doing. To-day a heavy business done up to 55*s.* 8*d.* cash, 55*s.* 10½*d.* a month, closing sellers 55*s.* 7½*d.* cash, 55*s.* 9*d.* a month, buyers less ½ per cent. No. 1, g.m.b., 55*s.* 9*d.*; No. 3, 53*s.* 3½*d.*; Gartsherrie, 63*s.*; Coltness, 64*s.*; Calder, 59*s.*; Kennel, mixed numbers, 53*s.*; Almond, 52*s.* 6*d.* Stocks have increased 35,000 tons since Dec. 25, in makers' hands. The exports of the week were 6320 tons, against 5580 tons in the corresponding week of last year; while there has only been 645 tons of Middlesbrough iron imported in the week, against 3135 tons in the same week of 1868, which is a decrease of 2490 tons on the week. Merchants who would not give out a single ton of bar-iron at the end of the year, though ever so ardently wooed, are now extremely anxious to get makers to take orders for a few hundred tons, at current quotations, but are not successful. Makers do not object to enter orders for a few tons, if for immediate delivery, but anything beyond that is reserved for quotation on delivery. The advance of from 1*s.* to 2*s.* a ton on pig-iron is compelling an advance in manufactured iron of about 2*s.* 6*d.* on second-class bars, and from 2*s.* 6*d.* to 5*s.* on plates. Angle-iron is also expected to participate in the advance, although no quotable change has yet taken place. First-class brands of bars, 7½. Railway chairs and pipes are also being quoted rather higher.

The Coal Trade is inactive here; and, in a weak and drooping market, sales are but slowly effected. During the week the shipments foreign and coastwise only amounted to 20,365 tons, against 27,425 tons in the corresponding week last year. The general revival which is overshadowing itself in the commerce of this and other lands gives hopes that the coal trade will experience its influence; but, in the meantime, it is to be regretted that miners' wages have begun to be reduced 6*d.* a day in some of the highest paid districts of Lanarkshire. The future, however, is dappled with hope.

Three cases of contravention of the Act 23 and 24 Vict., cap 51, took place last week, and the parties were tried at Hamilton, before Sheriff Veitch. John Semple, miner, residing at Burnbank, Hamilton, was charged with having contravened the above Act, and also the special orders of the overman, by smoking, or by igniting, or having a piece of ignited paper in a part of Greenfield pit, Hamilton, where the locality was dangerous in consequence of the existence of fire-damp. Semple pleaded not guilty. From the evidence it appeared that the section of the pit in which accused and about 30 others were employed was so dangerous that safety-lamps were provided for them, and that smoking or igniting anything was calculated greatly to endanger the lives of

all the workmen—about 150 in number—employed throughout the pit. In defiance of the repeated orders of the overman, Semple had been found smoking in this part of the pit. He was found "guilty," and in passing sentence the learned Sheriff referred in strong terms to the serious results which might have accrued from his carelessness. This being, however, the first case of the kind brought before the Court, he would give the accused the benefit of a fine; but, should he ever be brought up again on a similar charge, he would be sent to prison without alternative. Fined 1*l.*, or three weeks' imprisonment.—John Smith, miner, Stonefield, Blantyre, was similarly dealt with for a like offence; and David McNair, miner, Stonefield, was found guilty of the same offence, but his offence being somewhat more aggravated he was sentenced to pay a fine of 50*s.*, or undergo four weeks' imprisonment.

#### REPORT FROM NORTHUMBERLAND AND DURHAM.

JAN. 14.—There is a considerable improvement to be noticed in the Coal Trade in the northern part of Durham. At the Tyne Dock business is getting very brisk, both exports and imports increasing rapidly; so much is this the case that those magnificent docks are now fully occupied and employed, and an extension of them will be required at no distant date. The colliery railways in Durham are also getting more busy, showing clearly that the trade is improving. Of course, the house trade is dull, the very mild character of the season having this effect. The demand for gas, coking, and manufacturing coal has improved most. The Steam Coal Trade in the northern part of the district continues very dull, except at those places where contracts have been entered into; but, as the spring trade may be expected to open out soon, this branch of the trade may be expected to improve shortly. The Tyne drainage scheme progresses but slowly, and a great deal remains to be done before the water is reduced to the level of the High Main seam, where a great amount of coal can be worked. It is expected that the water will be reduced to the High Main in the Hebburn Colliery, in the first instance, and the coal worked there. A report is shortly to be made on the position of this important scheme by some of the most eminent mining engineers of the day.

At the Quarterly Meeting of the North of England Iron Trade, on Tuesday, there was a numerous attendance of gentlemen connected with the iron trade. The sales of pig and other classes of iron were considerable, and prices were as follows:—No. 1, 49*s.*; No. 3, 46*s.*; No. 4, 45*s.*; mottled, 44*s.* 6*d.*; white, 44*s.*—net cash. Makers are tolerably well sold forward at these advanced prices. The manufactured iron trade was reported to be in a better condition, and ship-builders are decidedly busy.

The following statistics of the Pig-iron Trade of the Cleveland district were issued to the trade on Tuesday, on the authority of the secretary, Mr. Jones, and show clearly the position of this important industry at the present time:—

THE CLEVELAND IRON TRADE, 1868.—The following list of furnaces has been revised, and a considerable number of furnaces that are either dismantled or are never likely to be again put in operation, without such alterations as to make them practically new furnaces, have been placed in a separate column, and furnaces not likely to be again blown in their present form have been struck out altogether:—

Easton—Bolckow, Vaughan, and Co. (Lim.)	5	.....	.....
South Bank—South Bank Iron Co.	9	.....	.....
Clay Lane—Clay Lane Iron Co. a	3	.....	.....
Cargo Fleet—Swan, Coates, and Co.	2	.....	.....
Normanby—Jones, Dunning, and Co. b	2	.....	.....
Ormesby—Cochrane and Co.	3	.....	.....
Clayton—Wilson, Pease, and Co.	3	.....	.....
Middlesbrough—Bolckow, Vaughan, and Co.	3	.....	.....
Tees-Side—Hopkins, Gilkes, and Co.	4	.....	.....
Linthorpe—Lloyd and Co.	4	.....	.....
Acklam—Stevenson, Jaques, and Co.	3	.....	.....
Newport—B. Samuelson and Co.	5	.....	.....
Clarence—Bell Brothers c	6	.....	.....
Norton—Norton Iron Co. (Lim.) d	1	.....	.....
Thornaby—W. Whitwell and Co.	3	.....	.....
*Stockton—Stockton Iron Furnace Co. e	1	.....	.....
*Carlton	.....	.....	.....
Grosmont—C. and T. Bagnall	1	.....	.....
Glaisdale—Glaisdale Iron Co.	.....	.....	.....
*Middletown—Middletown Iron Co.	.....	.....	.....
South Durham—South Durham Iron Co.	2	.....	.....
*Ferry Hill—Rosedale & Ferry Hill Iron Co. f	7	.....	.....
Witton Park—Bolckow, Vaughan, and Co.	4	.....	.....
*Towlaw—Weardale Iron and Coal Co. (Li.)	2	.....	.....
Consett—Consett Iron Co. (Lim.)	5	.....	.....
*Birtley—Birtley Iron Co.	.....	.....	.....
Wear—Bell Brothers g	.....	.....	.....
*Felling—H. L. Pattinson	.....	.....	.....
Jarrow—Palmer's Shipbuilding and Iron Co.	4	.....	.....
*Elswick—Sir W. Armstrong and Co.	1	.....	.....
*Walker—Losh, Wilson, and Bell	.....	.....	.....
Totals for Cleveland	83	.....	21

\* Denotes firms that are not members of Ironmasters' Association.  
a Clay Lane Co. have three furnaces being rebuilt.  
b Jones, Dunning, and Co. are raising one furnace.  
c Bell Brothers are rebuilding two furnaces.  
d Norton Iron Company are building one new furnace.  
e Stockton Iron Furnace Co. are building one new furnace.  
f Ferry Hill Iron Company have one new furnace nearly finished.  
g Bell Brothers are rebuilding the Wear furnace.

Make of pig-iron in 1867	Tons 1,147,901
Ditto ditto 1868	1,283,418
Increase in 1868	85,517
Makers' stock, Dec. 31, 1867	102,519
Ditto ditto 1868	80,898
Decrease in 1868	21,621
Stock in warrant stores, Dec. 31, 1867	71,826
Ditto ditto 1868	72,029
Increase in 1868	203

The exhibition of models and other works were scarcely so numerous as was expected, and we append a short account of the most prominent. At the high end of the room Mr. Adams, the architect of the building, exhibited his patent self-acting fire alarm and extinguisher, a most ingenious contrivance, which gives immediate notice of fire which may break out in any part of a building in which the apparatus—only a few inches in size—may be placed. Messrs. Lewis and Adams's patent warming and ventilating apparatus was in operation in the Exchange Hall, and was much appreciated. At the next stall models and diagrams of Whitwell's patent hot-blast stove were shown. The next stall was occupied by Mr. S. Baker, of Newcastle, who exhibited Ramsome's free grit grindstone, Peel's new patent valve-tap, the special steam-pump, and a model of the same; a working model of Stroudeley's improved ramps, or guide-plates, for re-railing rolling-stock; Green's patent solid drawn brass tubes for boilers and condensers, and other articles. Messrs. Heslop and Wilson, of Dean-street, Newcastle, exhibited the following machinery, for which they are agents:—Messrs. Kittoe and Brotherhood's patent "Paragon" steam-pump for feeding boilers, raising water, &c. The advantages claimed for it are its simplicity, cheapness, compactness, efficiency, and economy of working. There are no glands to the cylinder, consequently the friction and general wear and tear are reduced to a minimum, and no leakage can occur. By simply unscrewing the covers of the cylinder and valve-chest the whole of the working parts may be withdrawn for examination, and as they are all internal are entirely protected from grit and dirt. They are made to supply from 130 to 10,000 gallons per hour. As a mechanical contrivance the pump exhibited is unique. Schiele's "Excelsior" fan blasts (patent of 1863): The characteristics of these well-known and now generally adopted fans are their great simplicity of construction, cheapness, economy of power, great volume of blast produced, perfect noiselessness, and non-liability of getting out of repair. They are constructed and arranged also for all purposes for ventilation for public buildings, mills, chemical works, mines, &c.

Blake's Stone-Breaker, already well known in the district, which, with a great variety of machinery, engineers' tools, &c., is supplied by the Messrs. Heslop and Wilson, the exhibitors. These gentlemen also showed samples of patent driving-bands, and photographs of Messrs. Shanks' engineers' tools. John Elice and Co. (Limited), engineers, Manchester, showed models of a universal chuck, a portable vice, and a drill, and diagrams of lathes and engineers' tools. Mr. W. S. Fletcher exhibited a draught preventer—a piece of elastic, so arranged as to prevent draughts and rain getting under doorways. A large glass-case of specimens of steel, many of which had been at the late Exhibition at Paris, was exhibited by Fox, Head, and Co. This firm also showed specimens of Jones's (manager of their iron works) patent non-conducting cement, for preventing the radiation or transmission of heat. Diagrams of Jones's patent puddling-furnace were also exhibited. Mr. J. M. Rimington and Co., Newcastle and Middlesbrough, exhibited Justice's Anglo-American dead-stroke power-hammer. Mr. Jackson, on behalf of Mr. Farley, of Newcastle, showed some fine portraits of Messrs. Bright, Cobden, Gladstone, &c.

In connection with the introduction of steel tools, such as pitmen's picks, sinking hacks, mallets, &c., manufactured according to the processes lately discovered, we may mention that those tools, composed of cast-steel of excellent quality, and at a very low price, are just now being introduced into this district by Messrs. Heslop and Wilson, of Dean Chambers, Dean-street, Newcastle. Those picks are perfectly malleable, and easily work to a good point, which stands work much better than the ordinary picks in use; and as they are sold at a lower price than the ordinary picks, the advantage to be derived from their use can be easily imagined.

On Saturday evening the officials of the Springwell Colliery, at the invitation of the viewer (Mr. Peel), partook of a substantial supper at the house of Mr. Forster, Ship Inn, Mount, on the occasion of the erection of a new ventilating furnace. The chair was occupied by Mr. Peel, and the vice-chair by Mr. John Parkin. After the cloth had been removed, congratulatory remarks were made by several present on the advanced state of colliery ventilation now, as compared with that of 30 years ago, and the complete success of the new erection.

Two brothers were killed on Monday at Adelaide Colliery, near



Bishop Auckland, under remarkable circumstances. The brothers were hewers, one working at the night and the other at the day shift. At ten o'clock on Monday night one was preparing to leave, and the other was about to commence work, when a huge stone fell upon them, killing them both on the spot. Strange to say, the father of the unfortunate young men and another man met their deaths precisely in a similar manner whilst in the act of changing places.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

JAN. 14.—The reports which have come to hand from the various iron-making establishments in this district during the past week characterise the trade as being in a better position than that of any other, and although there is not that activity at some of the rail mills as there was a few weeks ago, the end of the present month will, no doubt, witness the employment of hands on full average time. There is a steady increase in the demand for rails, and prices are firmer than they were a short time ago, fresh engagements being entered into with tolerable freedom, 6½ to 6½ 7s. 6d. per ton being the average quotation for rails at the works. The confirmation of list prices at the Quarterly Meeting has imparted increased firmness in the trade, which, it is expected, will be still further strengthened by additional orders from the United States and continental markets. The Russian Government has sanctioned several new lines of railway, and large quantities of iron will be required for the construction of the same. The new Russian tariff still leaves the import duties high, though it makes a reduction of nearly 50 per cent. in the duty on rails. Nearly 11,000,000 lbs. were raised last year for the construction of Russian railways, giving some idea of the extent of the demand likely to take place, if nothing arises to disturb the peace of Europe. The makers of this district have hitherto sent large quantities of rails to Russia, and it is only reasonable to anticipate a stimulus in the demand by the reduction of the import duty. Already a large Russian contract has been distributed among the makers in South Wales, and others are expected to speedily follow. Large quantities of rails are now ready for shipment at the local ports for Mollendo, New York, New Orleans, San Francisco, Valparaiso, Callos, Baltimore, Philadelphia, Patras, Salonica, and Alicante, and the demand from the South-West Coast of America will, in all probability, continue good throughout the year, as the opening up of the railway system has just commenced in that country. The home trade continues quiet, but several of the large railway companies are spoken of as likely to be in the market for rails and other materials before many weeks have elapsed. There is a fair demand for bars, and stocks of pig-iron are said to have become greatly reduced. There is a fair prospect of the tin-plate trade attaining a satisfactory position before long, some large orders from the American markets being about to be given out.

The reports which have lately appeared in the *Mining Journal* respecting the unsatisfactory position of the Steam Coal Trade are fully confirmed by the returns issued for the past month, and which show a falling off in the exports at all the local ports. A favourable change has, however, taken place in the weather during the past week, and already the arrivals of vessels at the local ports are becoming more numerous, and there is some prospect of merchants and shippers speedily obtaining suitable tonnage. France has of late taken by far the largest quantities, and orders from that country are coming in with something like regularity, but a great many are now on the books, owing to the heavy gales which have lately prevailed. From the mail packet stations enquiries are about the average, and from some of the Mediterranean and Turkish ports the demand has slightly increased. The inactivity which has characterised the House Coal Trade for some weeks past still continues, but should the present fine weather continue a short time longer a large number of coasting vessels is expected to arrive at the local ports, and take in coals for West of England and Irish houses.

On Friday night Messrs. Davies and Sons, ironfounders, Briton Ferry, in conjunction with Mr. Morewood, proprietor of the Galvanised Tin and Tinned Plate Works, Baglan, gave their workmen their annual new year's supper at the Royal Dock Hotel, Briton Ferry. Mr. Isaac Davies presided, and the duties of "vice" were ably discharged by Mr. Dawkins, of Briton Ferry. Mr. Morewood, in responding to the toast of his health, said he first came among them 20 years had passed away, and he felt particularly struck with the great advance of trade in that part of the country; but it was owing to the great wealth of minerals underground, brought to bear by the energy and intelligence of those above ground. It was a cheering thing to see masters and men working together in harmony, and that was the only way for all to succeed. (Cheers.) The healths of Messrs. Davies and Sons were drunk in a like enthusiastic manner, and the Chairman, in responding, hoped they would continue to pull together—masters and men; and if that were done he had no doubt but that it would always be for the benefit of the employer and employed. Toast, song, and sentiment animated the meeting till a late hour, every person appearing to thoroughly enjoy himself.

The Dowlais Iron Company, by a timely concession, has averted a strike among the colliers in their employ. The colliers demanded that they should be allowed to have two men of their own to see the weighing properly carried out, the two men to be paid by them. The company at first refused the application, but after a few days conceded the point, and this decision is expected to affect every colliery in Glamorganshire.

Mr. John Hughes, and the other proprietors of the Landore Tin-Plate Works, were summoned on Saturday last, before the Swansea magistrates, charged with seven distinct breaches of the New Factory Act. The summonses had been issued at the instance of Mr. Mostyn, Sub-Inspector of Factories for South Wales. The first was for employing, on Nov. 23 last, Sarah Phillips in the works, without having first registered the first day of her employment. The second summons was for having employed the said Sarah Phillips without having first obtained a surgical certificate. The third summons was for having engaged David Morgan without having first registered the day of his employment. The fourth summons was for having employed the said David Morgan without having first obtained a surgeon's certificate. To each of the above offences the defendants pleaded guilty, and were fined in the mitigated penalty of 2½ and costs. The fifth summons against the defendants was for employing John Davies without having first registered the day of his employment. And the sixth summons was for not having first obtained the schoolmaster's certificate with respect to the said John Davies. This case was dismissed, the boy not being employed in the works. The last summons against the defendants was for having employed Sarah Morris at the works, without registering the first day of her employment. This case was proved against the defendants, and they were fined 2½ and costs.

The arrivals at Swansea include—the Fass Fern, from Carlisle, with 345 tons of calamine, to order; the Titania, from Carlisle, with 370 tons of zinc ore, for Richardson and Co.; the Caracaras, from Carlisle, with 435 tons of copper regulus, 84 tons of lead pig, and 5 tons of copper ore, for H. Bath and Son; the Betsy, from Pomeroy, with 188 tons of sulphur ore, for T. W. Parry; the San Fernando, from Coquimbo, with 150 tons of bar copper, 20 tons of ingot copper, and 380 tons of copper regulus, for H. Bath and Son; the Epsilon, from Paposa, with 128 tons of copper ore, 414 tons of copper regulus, 206 tons of copper ore, and 55 tons of ingot copper, for H. Bath and Son; the Delaware, from Carlisle, with 560 tons of zinc ore, for H. Bath and Son; the Law Ogilby, from Brestira, with 237 tons of copper ore, and 20 tons of lead ore, for H. Bath and Son; the Josephine, from Redon, with 95 tons of iron ore, for R. Crawshaw.

**THE TIN-PLATE TRADE.**—The Quarterly Meeting of the members of the Tin-Plate Trade was held at the Bell Hotel, Gloucester, on Thursday, Jan. 14. There was a good attendance of manufacturers and buyers, among the latter being Messrs. Nash and Co., Liverpool; Mitchell and Smith, London; French and Smith, London; and Von Dade'szen and North, London. A hopeful feeling pervaded the meeting as to the future of the trade, stocks in makers' hands being represented as small, and not more than sufficient to meet the ordinary requirements of buyers. American advices are favourable, and when the spring demand on account of the States commences, it is expected that a good trade will be done, by that time any stocks that may now be in buyers' hands will be paid away. Reference was made to the rise in tin, iron, and tallow, the chief raw materials used in the manufacture of plates, and the following resolution was agreed to as regards prices:—Resolved, that in consequence of the advance in tin, iron, and other raw materials, and the very unremunerative prices at which tin-plates have been selling, that the price be advanced 3s. per box. The members, as usual, dined together after the meeting. An attempt is being made to introduce a uniform wages scale at the various tin-plate works of the kingdom, and already some of the leading firms have given their adhesion to the proposal.

**FOREST OF DEAN.—THE RATING OF IRON MINES.**—At the Town Hall, Newnham, on Monday, before Capt. Gould, Sir Thomas Crawley Bovey, Bart., and Mr. Edwin Crawshaw, the overseers of East Dean, who did not appear, were summoned by the guardians of the Westbury-on-Tyvern Union in respect to a certain claim made upon them for poor rates under the last assessment upon the iron mines in the township. Mr. Carter said he appeared in the awkward position for both the guardians and overseers, but it would be necessary for him to briefly state the facts for the complainants. The magistrates, he continued, would probably remember that at the last valuation of the township of East Dean the Assessment Committee rated the value of the iron mines, thus adding property of the yearly value of 6000l. Before claiming the amount of rates due under this assessment from the Dowlais Company a refusal to pay was made, which subsequently led to the case being referred to the Court of Queen's Bench for argument. Of course, the whole claim made upon the overseers was upon the basis of the total valuation of the township—31,000l. a year rateable value; 6000l. was the rateable value of the iron mines in question, and the overseers, in their payment to the guardians, were short to the amount of the latter assessment, which was 100l. He was obliged to say that the situation of the overseers was a peculiar one. At the same time, as clerk to the board of guardians, he should be very sorry were the magistrates to make an order for them to pay the amount claimed; and, on the other hand, he would thank the Bench to adjourn the case until after the Exchequer Chamber had argued the point, and given its decision. Should that Chamber find judgment in favour of the claimants the overseers would have no objection to pay the amount forthwith, and he, therefore, trusted the magistrates would take his view of the case.—Capt. Gould: You suggest the matter should stand over until after the next Hilary Term.—Mr.

Carter: Certainly: I should regret if an order were made to-day, although I know the guardians are badly in want of money. (A laugh.)—Sir T. Crawley: Suppose the mines are shown in the Court of Queen's Bench to be not rateable?—Mr. Carter: Then the order cannot be made. The overseers wish to have this matter brought before you in order to show the parishioners of East Dean they have done all that is necessary. I am afraid were we now near March 25 I should advise you to make the order to-day; but this being only the beginning of January, I cannot do so; I would, therefore, suggest the case be adjourned until the next monthly sitting, which would then be in sufficient time for the annual balance of the Union accounts to be prepared.—The question was then adjourned until the February meeting.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

JAN. 14.—There is no alteration to record with regard to the Iron and Coal Trades of Derbyshire, both of which may be termed moderately good, the advantage being, of course, in favour of the minerals. The works on the Erewash Valley are doing tolerably well, and some large orders have been expected to come into the district from the Continent. The general tone, however, is more encouraging than it has been for some time. The demand for coal, notwithstanding the mild weather for the season, has been rather active, and there was sent from Clay Cross to London during the last month more than 30,000 tons. From other parts of the county, also, the tonnage going to the south has been large, and business appears likely to be rather brisk for some time to come. The Eckington Collieries are kept well going, as they have been during nearly the greater part of the past year. To Birmingham, Worcester, and the Western Counties the trade continues favourable, both for gas and other quantities of coal. There is rather more doing in the Burton-on-Trent district, and the collieries there are now resuming something like their wonted activity. Coke remains without alteration; there is a very fair demand for it, not only for the local works, but also for Northamptonshire. The clearing of several collieries which have been filled with water, and which was impeded by the late heavy rains, is now being carried out with energy, the dry weather favouring operations.

At Sheffield some of the heavy branches are busier than they have been, and there are some large orders in hand for locomotives and general railway material. The cutlery department remains rather quiet, still orders are coming in, and during the next week or two manufacturers will be in a position to indicate the prospects before them for some months to come. The fame which the Sheffield armour-plates have achieved, and their world-wide celebrity, is likely to be maintained, so far as production is concerned, during some months to come. The iron works in the South Yorkshire district are kept well going, there being a considerable business doing in rails and plates, so that the mills at most of the large establishments are fully employed. There is very little doing at the steel works of Cammell and Co. (Limited), at Penistone, but it has been stated during the week that the rail-mill is about to be set going, and the activity which has hitherto been the rule at the works will be resumed. Coal-masters still complain of the slackness of trade, and the low prices obtained for their produce. The tonnage going to London is still very moderate, and by no means equal to what it has been for the corresponding periods of former years. No alteration for the better is, however, expected until a reduction in the carriage rate takes place, and which there is every reason to believe will be conceded by the two railway companies connected with the district, in their own interests, if for no other reason. The business doing to Grimsby is quiet, and rather lower prices in some instances have to be taken for steam coal. The rates at some parts of Lancashire have been lowered by the Manchester, Sheffield, and Lincolnshire Railway, but not to an extent sufficient to allow of the Yorkshire coalowners competing with those of the Wigan district, who in some instances have an advantage even now of 1s. per ton. The exports of coal from Goole continue favourable for the season, but there is but little doing with Hull. In coke a good business continues to be done for home consumption and for exportation.

**THE HAYDOCK COLLIERY EXPLOSION.**—The proposal to amalgamate the funds which are being raised for the relief of the sufferers by the several colliery explosions which have occurred in the neighbourhood of Wigan meets with general favour, and a meeting is to be held at Wigan to consider the subject. The charitable in the neighbourhood of Haydock met in that township on Tuesday afternoon, when a sum of 800l. was promptly subscribed, to be handed over to the general funds, should such be formed, and if not, to be appropriated solely to the relief of the distressed in that township. One-half of this 800l. was given by the proprietors, and 200l. by Mr. W. J. Legh, M.P. The request on the bodies of the 26 deceased was resumed at the Ram's Head Inn, Haydock, yesterday, before Mr. Driffield, district coroner. Mr. Higson, Government Inspector, was present. Mr. Maskell Peace, of Wigan, watched the proceedings on behalf of the proprietors, and Mr. Wm. Pickard, miners' agent, on the part of the men. The first witness called was Hugh Arnold, the only survivor of the 27 workmen who were employed in the part of the workings where the explosion occurred. He could, however, tell little about the accident. He felt the shock, and then he ran till he was overpowered by the choke-damp. He remembered nothing more till a week afterwards. Joseph Marsh was the next witness called. He worked in a place next to that of his brother, John Marsh, whose shot is believed by most persons hitherto called to have ignited the gas. Joseph did not go round the pit that morning, as he was ill, and so far as the evidence of the exploring party goes, the indications in the spot where he ought to have been working went to prove that the gas had come from there. It had come from a fault, and a hole there which would have been examined by the witness when he went to work on the Thursday before the explosion had not afterwards been looked to by him, although he had fired a shot on each of three subsequent days. The coroner pointed out to Marsh the danger he had incurred. Mr. Higson remonstrated him for his omission. The coroner said it appeared from the witness's statement that he had not been told anything about the gas at this hole by those in authority, although he was a new man, and had only worked three days in the pit. They could not say, therefore, that any blame attached to him, although he might have caused the explosion on the day before. The evidence was valuable, as it showed the want of instructions from his superiors. The underlooker, Isaac Billinger, was again called, and re-stated his opinion that the deceased fireman Greenall was a trustworthy man. He could not, however, explain how it was Greenall or his party did not take Marsh to his work on the morning when he went first. The jury returned a verdict of "Death by explosion of fire-damp at John Marsh's blow-out shot; but whether there has been an accumulation of gas or a sudden outburst, there is no evidence to show."

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

JAN. 14.—The Quarterly Meetings of the South Staffordshire Iron Trade have been held to-day and yesterday, at Birmingham and Wolverhampton respectively. At each there was a numerous attendance, and, on the whole, a hopeful feeling. At the same time, the demand for iron is quiet, and, in the majority of cases, the works cannot be kept on full time. Had an advance been made in the prices at the Preliminary Meeting, as some, it is understood, were inclined to propose, the trade would have been most prejudicially affected. In point of fact, many of the ironmasters regard a change of prices as a most dangerous experiment for South Staffordshire. As to the grounds for anticipating a brisk demand shortly, the reduction of the Russian tariff is by no means an unimportant one. We have sent a great deal of iron to that country under the old tariff, and we have now not only a reduction of duties of from 35 to 48 per cent., but an abolition of the advantage which competitors who send by land had over this country. No doubt Russian requirements for railway purposes will be large, and as Government is interested in pushing on these enterprises we may anticipate that the officials will rather favour than hinder importations. The best proof of the general anticipation of an improved trade this year is to be found in the disposition to insist on the full advance previously asked in the price of pigs. The tone of the Cleveland meeting tended to make sellers firm at Wolverhampton and Birmingham, and sales were made at the full rates, which are high enough considering the price of manufactured iron.

Mr. Brodgen, the member for Wednesbury, is a shareholder in the Union Iron Company, which is working the Millfields Iron Works, but not a director, as has been stated. It is said that Mr. Brodgen is likely to join another concern in the district.

The report of the South Staffordshire and East Worcestershire Mine Agents' Association will, no doubt, be given in another page of the *Mining Journal*. The association appears to be progressing, and the general spirit of the report is very satisfactory. The establishment of such an association was suggested in this letter some years since, and there can be no doubt that a wide field of usefulness is open to it. Everybody needs the stimulus derived from emulation from comparison with others, and the advantage of the general experience of those engaged in similar pursuits. Centres of information of discussion and consultation are valuable in all professions, and this association may do much to raise the science and practice of mining in the district, and to elevate the standard of

those who pursue it. With regard to the previous attitude of the association towards the Inspector of Mines, the directors have shown wisdom in avoiding any reference to the subject. In this way all soreness may be healed and forgotten. The papers were of an extremely interesting and practical character, and the proposal to establish a permanent place of meeting, in connection with the Geological Museum, which gained so much praise from Hugh Miller when he walked from Wolverhampton to Dudley, and slept at a temperance house in the latter town, is one well worthy of the support of the whole neighbourhood.

The question of the liability of the owners of collieries to make compensation to workmen for injuries arising from neglect of the owners or their servants was raised in the Hanley County Court, on Wednesday, before Mr. W. Spooner, the Judge. A working collier sued Mr. W. Bowers, the proprietor of the Berrys Hill Colliery, for 57s. damages on account of injuries plaintiff sustained from an explosion. His evidence was to the effect that on the morning of Aug. 8 he and others were told by the fireman that the pit was "all right," and they went to work with naked candles, there being no lamps; and an explosion took place as soon as they got into the drift, by which the witness was burnt. It was objected for the defendant that as the injury was, according to the plaintiff's case, the result of another servant's negligence, the proprietor was not liable, on the ground that a master is not responsible for injuries suffered by one servant in consequence of the misconduct of another. The Judge, however, wished to hear the case for the defence, when it was proved that the fireman cautioned the plaintiff against going into the workings, as, in consequence of the lamp having been removed, he had been unable to make an examination, but the plaintiff went in opposition to this warning. The case was, consequently, dismissed, with costs.

A gratifying presentation was made on New Year's Day to Mr. Thomas Plant, of Longton. Mr. Plant was one of the proprietors of the Whitfield Colliery, near Longton, and is now of the Jackfield Colliery, near Burslem. As he possesses a thorough practical knowledge of mining, his co-proprietors have left the management of the two collieries named in his hands, and the results have been of a highly satisfactory character; consequently, it was decided to inaugurate the new year by recognising, in a marked manner, Mr. Plant's valuable services. The proprietors, and other gentlemen invited, assembled at the Union Hotel, and sat down to a splendid dinner, served up in first-rate style. Mr. S. Bridgwood occupied the chair, and Mr. Robert Hawley the vice-chair. The testimonial consisted of a magnificent gold watch, gold guard, fob-chain, and seal, procured from an eminent firm, and enclosed in a case. Mr. Thomas Bettany, china manufacturer, and one of the colliery proprietors, made the presentation. Mr. Plant made a suitable acknowledgment. The following is the inscription on the watch:—"Presented to Mr. Thomas Plant by his co-partners in the Jackfield and Whitfield Collieries, as a grateful acknowledgment of his services as manager. January 1st, 1869."

Some disturbance has taken place at Rowley Hall Colliery amongst the men, in consequence of the proprietors wishing to get the Ruck coal in two divisions, and paying for the same by the ton; but the rate of wages offered appeared to be so inadequate for the work to be done that the colliers refuse to enter upon the contract at the prices proposed to be given. There is no doubt the long wall system is safer than the rib and pillar method of getting coal, but unless colliers can earn a fair rate of wages at the former mode of working they will be sure to prefer the latter. Besides, the plan of getting coal by contract is new in these districts, and full of difficulties, as there would want not only a superintending mine agent at each pit, but other things that do not occur under the butty system, would arise, and interfere with the free action of the men. There are some parties who wish to get rid of butties, and a good deal is said about them which is not true; but the present supervision of collieries, and the mode of raising coal in the South Staffordshire districts are such as does great credit alike to the masters, ground bailiffs, and butties, and this every practical man knows.—*Wolverhampton Chronicle*.

The industrial condition of Bilston is being improved by the re-starting of the Bradley furnaces, and the mills and forges of Millfields. The proprietors of the former are Messrs. G. B. Thorneycroft and Co. (Wolverhampton), and the latter have just been purchased by a joint-stock company (limited), of which it is stated Mr. Brodgen, M.P., is a shareholder. The foundries are in better, although not yet all in full, operation. At the Highfields Works (Messrs. T. Perry and Son), all the departments are now in tolerable activity. The present rate of production of iron bedsteads at this establishment is 500 per week. Those now in demand are principally for the Australian and South American markets. In the engineering department it is noticeable that a large proportion of the work now being executed is for iron mills and forges in the North of England. These include a vertical engine for rolling-mill, 85-horse power, and an immense pair of gullotine shears, for cutting iron 15 feet by 2 inches, both for the Cleveland district. For the Barrow Iron Works Messrs. Perry made recently, by a patent process of moulding exclusively their own, a pair of fly-wheels, 30 ft. diameter, with 18-inch "face" and 8-inch "pitch." Another pair, for the Lancashire iron district, are also in course of completion. The jaspers and tin-plate workers are better engaged than reported for some time past, and the prospects of trade in summer "season" goods are encouraging. At the London Works (Mr. John Marston), the patterns of ware recently introduced display an excellence of art-decoration which a few years ago was unknown to Bilston goods, and other principal manufacturers here are assimilating their productions in this respect to those of rival makers in the neighbouring town of Wolverhampton.

The Black Country at work presents an industrial hive which the queen of all the bees might envy. The extent and variety of its produce in a single week are something prodigious. They include the raising of 80,000 tons of coal, 20,000 tons of ironstone, 5000 tons of limestone, 2000 tons of fire-clay, and 1500 tons of basaltic stone, or Rowley Rag; also the smelting of 10,000 tons of pig-iron, the rolling of 15,000 tons of finished iron, and the fabrication of 2000 tons of cast-iron ware, 200 tons of brass and copper ware, 380,000 locks and keys, 30,000 bolts, 1000 tons of chains and cables, 50 tons anvils and vices, 200 tons agricultural implements, 6000 tea-trays, 50,000 walters, 3000 pairs of spectacles, 500 tons of glass, 250 tons of hollow ware, 200 tons anchors, 200 tons boilers and gasholders, 1000 saddles, 500 sets of harness, 500 tons of nails, 2000 tons of railway and engineering ironwork, 6000 traps, 500 tons of edge tools and steel toys, scores of miles of tubing, and an innumerable array of miscellaneous small wares, ranging from a rivet to a candlestick.—*Birmingham Daily Post*.

A detailed report of the Incorporated Association of Mine Agents of South Staffordshire and East Worcestershire annual meeting at Dudley, on Monday, will be found in this week's Supplement.

#### GOLD FIELDS OF BALLARAT—COLONY OF VICTORIA—NO. II.

By THOMAS CARPENTER, Mining Engineer.

Six large auriferous regions are now being but very partially worked: the richest is Ballarat, the metropolitan gold field of Victoria. The Bendigo gold field was its great rival for many years, the gold deposits of that district (in the alluvial) were much more easily worked. Ballarat is a large inland town, with 50,000 inhabitants, possessing fine public and other buildings, a copious stream of water, lighted with gas, and surrounded by some of the richest land in the world. The district is 96 miles from Melbourne and 50 from Geelong; both places by rail. Its gold-producing area measures some 70 square miles. The older formation is schist, the more recent basalt. On the east the hills run north and south, with a gradual undulating slope to the west, at the base of which a small river runs, called the Yarrowee. On this abuts a large plateau, or tract of table land, made up or formed in the deepest part of eight distinct strata, four of which are igneous, and four of sedimentary deposit; the whole depth is some 380 feet. The basalt forms by far the major part; the upper strata of this rock on the top is much honeycombed, and light, but that running deeper is very hard and dense, and possesses a very fine crystalline fracture. This formation must be the result of Nature's vast doings at a much later epoch, and each deposit must have taken place at distinct epochs, and great must have been the interval of time between; all this reposes on schist, the original surface. This surface was traversed by many rivers, all of which took their source from the contiguous hills, which were once traversed by large and well-defined lodges of gold-bearing quartz, now more or less deranged. The denudation from these have supplied all the rich diluvium, the same as the stripping of the backs of the tin lodes in Cornwall supplied the streams of stanniferous diluvium of that country. These rivers running from the hills in all directions number some 86, and are all found to run into one channel, known as the Golden Point, which averages some 350 ft. in breadth. The Golden Point has been worked on for a distance of a mile, and the gold raised by those companies working on its course—the Cosmopolitan, Great Extended, Koh-i-noor, and Band of Hope—amounted to 2,000,000l., of which 1,300,000l. was paid to the shareholders in dividends.

It was in working or scratching the surface overlying the schistose rocks, on the slopes of the hills and the drift of the small rivulets or gullies by which they were traversed, that led to the first discovery of these immense deposits of gold—gold amounting to millions in value, altogether unheard of in the annals of gold-producing countries. Men, after years of toil spent in sinking shafts and excavating drives, went to their work in poverty, and at night returned home the possessors of great wealth. These hardy labourers, having hope and faith for their guide, have laid bare those long-hidden treasures which has caused the name of Ballarat to be spoken of wherever the English language is spoken. No part of Victoria has contributed more to the greatness which she has been enabled to reach than this, her richest gold field. Seventy square miles is a large area, and



40,000,000. worth of gold is a great deal of wealth, and, notwithstanding this, very little indeed has been done when compared with that which remains to be done; and more particularly that done at the outset was accomplished under every possible difficulty of the most trying character, many of the men were inexperienced, and the appliances within their reach were of the crudest description, and in no way applicable for the class of work to be prosecuted. Determination achieves much, and it is to determination that many of the Ballarat miners, as well as other classes, are much indebted for their present position. If by such a method so much gold has been raised, it may well be asked what could have been raised, and what remains to be raised, if a more perfect system of mining had been resorted to, such as that in use in the British mines and those abroad under British management? With the past we have finished, it remains to be seen what can be done in the future. There is no lack of rich deposits of gold, but there is the lack of adequate means required for their development. A great field has been discovered for investment in mining, which has no parallel, as the following statement suffices to show:—Chiefly under the co-operative system 22 companies, on an outlay of 889,274, have discovered gold, in 250 acres of land, forming a part of the plateau already described, to the value of 4,250,927. 15s. 10d., out of which sum 2,225,212, has been paid in dividends; 12 of these, the larger, are now working, the market value of which at present is 718,997.

The hills, the source from which all the diluvium has come, are merely being scratched, and in doing so a few scores of men are working where as many thousands should be, with the aid of powerful machinery. Lodes of great value may be said to be discovered for the purpose of being monopolised—or, in other words, to remain dormant. Again, there are thousands of acres of plains overlying rivers of auriferous drift, and only a portion is being worked—all idle for want of capital. It appears very strange that such should be the case. What can it be owing to? Is it to the one of two things?—is it that the capitalists of this country are not sufficiently informed about the great richness of one of the most important parts of the British dominions? or is it that some few companies were sent to the colony in 1852, shortly after the time of the gold discovery, and proved failures? Such being the case, how long is it to remain so. All mining investments do not prove profitable, it is true, but there was no reason why capitalists should not be receiving large and profitable returns long before now from mining in Victoria. The ground taken up and afterwards abandoned by some of the London companies has, and under the most indifferent management, returned far more than their paid-up capital, and some are still being wrought with profit. Very little English money has yet been spent in *bona fide* mining in Victoria. Much of the machinery that left here was never landed, and those who were sent out in charge were principally men in no way fitted for the offices they held. Brazilian and Cornish knowledge did not avail them much. They were panic-stricken—men ran away. Machinery was carted into the interior some 100 miles and more, at a cost of more than 100l. per ton, and never used—some has since been broken up and re-cast, and some carted to other districts. Some of the managers said mining would not pay in Australia, forgetting that they at the same time had the same chances as those who were raising so much gold in their very midst. Nay more, they had large sums of money at their command, powerful machinery for drainage and for reduction purposes, the latter constructed on the same principles as that in use in the St. John del Rey and other foreign mines. But they had no energy, and they lacked enterprise; the golden fleece was wrested from them, hence the loss sustained by the English capitalist in Australasian mining. Had the converse of this been the case, millions of money would have been invested in developing the vast and rich auriferous regions of the country. With good management the first investment would have returned the money invested some 15 years since, and the profits must have been large and continuous. Instead of capital being employed in developing a part of England's great territory, large amounts have been expended in foreign mining, where no such chances and facilities were to be obtained, as compared with those obtainable in the colony of Victoria, a colony that has produced in little more than 16 years 160,000,000. worth of metallic wealth, the major portion of which is the result of disorganised labour. Where is the country that bears a parallel? Not South America, the land of anarchy. It is true that a few mining companies were formed to mine for gold in Australia in 1852, and, with the exception of one, they failed; but such failure must not be attributed, as may well be seen, to the want of auriferous deposits. No; but to the worst of management. There are those in this country, be it known, who are responsible for all this. Let them deny these charges if they can. Results have shown what individuals have achieved since 1852, when all had the same opportunity. The ground that has been yielding up all this wealth, year after year, was then open to all, and in 1852, and years subsequently, a great deal was lying dormant. Such being the state of things, why, let me ask, should a country like this be condemned? You are told on all sides that capital invested there in mining would result in loss. We have tried it, and we have failed—we who were skilled. But, fortunately for the country, those who did not possess such skill persevered, and they did not fail. I ask those who take upon themselves to speak with such authority about mining in Australia to come forward and refute these statements if they can.

#### GOLD MINING IN CALIFORNIA.

Although the official report of the United States Government upon the mineral resources of the country does not furnish any glowing accounts of the results of Californian mining, the opinion is very generally entertained that, by the application of additional capital, enormous profits may be obtained, whilst those who invest it will have the advantage of the large amount of exploratory works done by others. One of the chief sources of wealth in the United States, east of the Rocky Mountains, has been, according to the report, the increase in the value of land; but in the mining districts hitherto there was little land to which a fee-simple title could be obtained. But that Californian mining has in some cases proved highly remunerative is beyond question, for it appears that in 1865 the largest income in the State was that of Jules Fricot, who made in that year \$132,511 by quartz mining and the sale of quartz mines; and the third largest was that of James P. Pierce, who made \$102,011 by placer mining; and in the list of incomes for Nevada County, various returns of incomes of \$89,681, \$42,890, and so on, even the lowest, that of R. C. Black, being \$1804, derived from the same source.

The introduction of the NORTH STAR GOLD MINING COMPANY on the London market naturally leads one to seek what the official report says of the district in which it is situated. It appears that the ore exists in bunches, or else in shoots or chimneys, which cut the axis of the vein at every conceivable angle between the horizontal and the vertical; and these are always less than the length of the vein itself, and sometimes than its width, also. When we consider the richness of the veins, the length of time that some of them have been worked, and the amount of gold annually produced, the most important quartz mining region of California is, without any doubt, that of Grass Valley, in Nevada County. The veins in this district, and particularly those which have been the most productive, are noted for their narrowness as well as for the richness of the quartz. They are encased in a hard metamorphic rock, and the expenses of mining are, as a general thing, higher here than anywhere else in California. Within the last 14 years the total production from the quartz mines of the Grass Valley district has not been far from \$23,000,000. The entire district is highly interesting. As in all mining localities, there are hundreds of claims and ledges, but the principal leads are the Eureka, Massachusetts Hill, Boston, Ravine Flat, New York Hill, Wisconsin Flat, Missouri Hill, Lafayette, Allison, Norambayna, Gold Hill, Union, Howard, Ophir, Hueston, North Star, Osborn, Lone Jack, and Diamond. There are 22 stamp mills in the city—the Allison mill, eight stamps—not in operation; the Eureka, eight stamps—not in operation; the Cambridge, ten stamps—not in operation; the Coe, with new crushing process—not in operation; the Eureka, one of the best mills in California, thirty stamps—always in operation, day and night, Sundays included; the Empire, the most elaborately finished, and one of the most successful in the State, forty stamps—in operation; the Gold Hill, twenty stamps—in operation; the Larrimer, nine stamps; the Saxon, eight stamps; the Lucky, fifteen stamps; the North Star, twenty stamps; the Perrins, five stamps; the Sebastopol, 12 stamps; the Smith and Northey, eight stamps; and the Union, twenty stamps—all in operation. There are also the Hartley, eight stamps; the Lone, ten stamps; Lady Franklin, eight stamps; Merrimack, ten stamps; Norambayna, ten stamps; Osborn,

fifteen stamps; and the Stockton, another mill—none of which are at present in operation. The mines are all good that have been worked, and the mills not in operation are either the victims of litigation or the process of "freezing out."

The Eureka is the representative ledge of California, and the best gold mine of modern times. Although the Eureka has proved itself the richest gold mine in the world, it was not until November, 1863, that it was profitably worked. The vein runs in a south-easterly and north-westerly direction, pitching west of south at an angle of 75°, the upper wall being granite and the lower wall greenstone. The rock is of sulphuretted order, divided into three grades, paying at the rate of \$400, \$300, and \$214 respectively per ton for the sulphurets, which are worked to within 5 per cent. of fire assay. The quartz averages \$48 per ton. The gross yield of the mine in 1866 amounted to \$596,053, and dividends during the same period being at the rate of \$30,000 a month, or \$360,000 for the year. In 1867 it was about the same. This year nearly \$50,000 worth of new machinery has been added, and the dividends remain the same. There are 1800 feet in the claim, and it is owned by eleven San Francisco gentlemen, five gentlemen of this city, and three New Yorkers—Messrs. J. R. Dickinson, Thomas Hope, and Benjamin Stillman. Mr. Watt, the superintendent, took me through the mine and mill. There are two shafts, respectively 400 and 500 feet. There are 170 men at work in the mine, who extract about 70 tons of quartz per day. There are two 16-in. cylinder engines, one for hoisting rock, and the other for pumping water from the mine.

The rock is first put through one of Blake's crushers, then goes to the mill, the machinery of which consists of thirty stamps, and Hunter's and the Porcupine amalgamation and washing-furnaces for the reduction of the sulphurets. The gold is also assayed and made into bars at the mill.

#### In the Court of the Vice-Warden of the Stannaries. Stannaries of Devon.

**PURSUANT to an Order or Decree made in a Cause of Bayly v. Thierley** the Younger, the creditors in respect of EAST BROOKWOOD MINE, in the parish of HOLNE, within the said Stannaries, are, on Friday, the 23d day of January inst., at Eleven o'clock in the forenoon, to COME IN and PROVE THEIR DEBTS before the Registrar of the said Court, at his office in Truro, or, in default thereof, they will be EXCLUDED from the BENEFIT of the said Decree.

F. HEARLE COCK, Truro  
(Agent for Samuel Cater, Plaintiff's Solicitor, Plymouth).  
Dated Registrar's Office, Truro, 9th January, 1869.

#### In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

**PURSUANT to a Decree made in the Cause of Gately v. Ball**, the Creditors in respect of DUCHY AND PERU MINE, in the Parish of PERRANZABULOE, within the said Stannaries, are, on Monday, the 26th day of January instant, at Eleven o'clock in the forenoon, to COME IN and PROVE THEIR DEBTS before the Registrar of the said Court, in Truro, or in default thereof they will be peremptorily EXCLUDED from the BENEFIT of the said Decree.

Dated Registrar's Office, Truro, January 14th, 1869.

#### In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

**IN THE MATTER OF THE COMPANIES ACT, 1862, and of the WHEAL ROSE MINING COMPANY (LIMITED).**—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court, was on the 31st day of December last, presented to the Vice-Warden of the Stannaries by John Clark Isaac, Richard Hawke, Henry Edgcombe, and Charles Isaac, of Liskeard, in the county of Cornwall, merchants, carrying on business under the style or firm of Isaac, Hawke, Edgcombe, and Co., creditors of the said company, and that the said petition is directed to be heard before the Vice-Warden, at No. 18, Thurlow-square, Brompton, in the county of Middlesex, on Saturday, the 23d day of January instant, at Eleven o'clock in the forenoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, their solicitors, or agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioners, their solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 30th day of January instant, and notice thereof must at the same time be given to the petitioners, their solicitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Solicitors, Truro, Cornwall; GREGORY, ROWCLIFFES, AND RAWLE, No. 1, Bedford-row, London (Agents of the said Solicitors).

Dated Truro, January 12th, 1869.

#### In the Matter of the Companies Act, 1862, AND OF THE EAST WHEAL ROSE CONSOLIDATED SILVER-LEAD MINING COMPANY (LIMITED). IN LIQUIDATION.

**NOTICE IS HEREBY GIVEN**, that in accordance with instructions received from the liquidators, Mr. JULIAN, auctioneer, Truro, will at Twelve o'clock at noon, on Friday, the 23d day of January, on the aforesaid mine, situated in the parish of St. Erne, in the county of Cornwall, OFFER FOR SALE, BY PUBLIC AUCTION, the WHOLE of the MINING PROPERTY, consisting of LEASE (19½ years of which are unexpired), PLANT, MACHINERY, TOOLS, TACKLE, IMPLEMENTS, with sundry other articles for mining purposes, in One Lot, when, should no suitable offer be made for the purchase of the property, he will, in pursuance of the instructions of the liquidators, SELL the WHOLE of the TIMBER, HORSE WHIM, rollers, kibbles, miners' and other tools, in separate lots.

The conditions of sale will be produced at the time of selling. All further particulars can be obtained from the auctioneer, and catalogues can be had from either Capt. JAMES EVANS, St. Agnes; Capt. THOMAS, St. Erne; or the liquidators, at their offices, 26, Nicholas-lane, London.

#### TO CAPITALISTS.

**SLATE QUARRIES FOR SALE IN NORTH AND SOUTH WALES.** MR. GEO. A. H. POTTER has FOR SALE, BY PRIVATE TREATY, FOUR VALUABLE SLATE QUARRIES, called

FOEL PAWR, FOEL FACH, CWM CLAN, and LLYFNANT, Situate in the Counties of CARDIGANSHIRE and MONTGOMERYSHIRE. They are in the immediate vicinity of the railways, shipping wharves, and rivers. Plenty of water to turn any machinery required. A vein of copper ore runs through a portion of the Foel Fawr property. For full printed particulars, and to treat, apply to GEO. A. H. POTTER, Auctioneer and Valuer, 17, Orange-street, Swansea.

#### MINING PLANT FOR SALE.

**TO BE SOLD, BY PRIVATE CONTRACT, the whole or portions of the valuable PLANT and MACHINERY in and upon the PENPOMPREN & PENYBANK UNITED SILVER-LEAD MINES, TALLYBONT, near ABERYSTWYTH, CARDIGANSHIRE,**

Comprising TWO WATER-WHEELS, nearly new (with iron segments), 40 feet diameter by 4 feet breast, and 12 feet diameter by 4½ feet breast respectively; upwards of 750 feet of LAUNDERS to ditto; CRUSHER, with 30 inch diameter rollers, double-revolving improved WINDING MACHINE; 600 to 700 fathoms of WIRE ROPE, with pulleys and shivers to support ditto; 11 fathoms 9 inch PUMPS, 15 fathoms 6 inch ditto, 20 fathoms 5 inch ditto; 90 to 100 fathoms of iron PUMP RODS; electrical signalling apparatus, with 1500 yards of conducting wires; 400 to 500 yards of double-iron bridge tram RAILS; patent atmospheric American ORE STAMPS, with speed gearing for ditto; one ZENNER'S rotating BUDDLE, 18 feet diameter; two circular BUDDLES, with 9 ft. wheel to drive ditto; one OFFICE (of wood) 12 by 10 feet square; one bin, scales and weights, wooden sheds; six JIGGING HUTCHES; flat buddle, trunks, strakes, do. tubs, catch p's, sieves, barrows, tools and utensils on dressing-floors, kibbles, tram wagons, balance and pendulum bobs, angle pulleys, crab winch, lifting screw, chains, tackle ropes, sundry lots of timber and ironwork, ladders and dividing boards in shafts, one horse and cart and two sets of harness, patent straw cutter and stable utensils, assayer's furnace and apparatus. Together with all the other sundry MATERIALS and APPLIANCES necessary to the working of an extensive LEAD MINE, the whole plant being in good order, of recent construction, and of the most modern and approved workmanship.

Apply to Mr. EDWARD GLEDHILL, manager, at the mines, who will furnish all requisite information and particulars.

#### NORTH WALES—QUEEN'S FERRY, FLINT. CLOSE TO THE RAILWAY.

**TO BE SOLD OR LET, DESIRABLE FREEHOLD MANUFACTURING PREMISES, with ENGINE-POWER and LAND.**—A plot of about one acre, with substantial factories, engine-house chimneys, stable, outbuildings, and sheds, suitable for any manufacturing purpose. ENGINE of most recent construction, and BOILER nearly new. For further particulars, apply to JOHN TEMPLE, 32, Redcross-street, Liverpool.

**IMPORTANT MINING PROPERTY FOR SALE IN RHENISH PRUSSIA.**—A BLENDLE MINE, giving 3 to 4 tons of blends per fathom; a COPPER MINE, averaging 14 per cent. of copper; and THREE LEAD MINES, with 25 per cent. of lead. Apply for particulars, to O. J. YOUNGHUSBAND, Esq., Wiehl, Kreis Gummersbach, near Cologne, Prussia.

#### ENGINES FOR SALE.

**FOR SALE, ONE 54 in. cylinder PUMPING ENGINE, 9 feet stroke, equal beam, with or without TWO 12 ton BOILERS.** Also ONE 36 in. PUMPING ENGINE, 9 ft. stroke, with or without a 10 ton BOILER. With an addition of ONE 8 ton BOILER also FOR SALE. To be sold cheap. Apply to MICHELL and JENKIN, Engineers, Redruth.

**TO LET, A VALUABLE COAL MINE.**—Apply to Mr. GEORGE DAVIDSON, Mawley, Clebury Mortimer, Shropshire.—Dec. 12, 1868.

**SILVER-LEAD MINE.—A FIFTH SHARE FOR SALE** of ONE of the most PROMISING SILVER-LEAD MINES in the KINGDOM. Price, £2000. The above FIFTH could be purchased by one or more. None need apply who do not embark for investment. For full particulars, and engineers' reports, address—"O. P." Messrs. Lee and Nightingale, 16, Castle-street, Liverpool.

#### IMPORTANT TO CAPITALISTS.

**FOR SALE.—SEVERAL MINES—SILVER-LEAD, MANGANESE, and PHOSPHATE OF LIME**—close to rail and river, near the RHINE, GERMANY. Particulars of F. BAUTZ, 70, Lower Thames-street, London, E.C.

**FOR SALE, cheap, a 16-horse power PORTABLE STEAM ENGINE, new, and with all recent improvements, guaranteed.** FIRST-CLASS PORTABLES, 5 to 25-horse power, on advantageous terms. Prize Medals awarded—Hamburg, 1863; Paris, 1867, &c. FOR SALE, EIGHT very superior SECONDHAND PORTABLE STEAM ENGINES 5 to 10-horse power, by eminent makers, in excellent condition. BARROWS AND STEWART, ENGINEERS, BANBURY.

**IN THE TOWER FOUNDRY IS THE TYNE DEPOT FOR** MACHINERY of every description for WOOD and IRONSTONE, CORN-CRUSHING, and PUG MILLS. Also, AGRICULTURAL IMPLEMENTS.

PROPRIETOR, G. HARLE, JUN.,

No. 49, MAPLE STREET, NEWCASTLE.

PURCHASERS of PORTABLE ENGINES and STEAM CRANES will do well to ask G. HARLE of the price for the same.

**ROSSA GRANDE MINING COMPANY.**—15,000 shares, 20s. each, fully paid-up. 85,000 shares, 20s. each, 14s. paid. The SHARES RANK according to the AMOUNT PAID. FOURTEEN fully-paid SHARES would RECEIVE the SAME DIVIDEND, and are of the same value, as TWENTY with 14s. paid:—Cost of 20 shares, 14s. paid, at present price, 11-16ths pm. .... £27 15 0 Cost of 14 shares, fully paid, at present price, ½ pm. .... 21 0 0 Difference in favour of fully-paid shares ..... £ 6 15 0 January 13th, 1869.

**THE TAQUARIL GOLD MINING COMPANY (LIMITED).**

Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders of the company will be HELD at the London Tavern, in the City of London, on TUESDAY, the 19th inst., at half-past Three o'clock precisely, for the purpose of confirming the resignation of all or some of the present directors of the company, and for confirming the appointment of the present directors; and also for the purpose of passing special resolutions for cancelling, altering, and varying some of the regulations contained in the Articles of Association.

By order of the Board, FRED. R. BLUETT, Secretary.

51, Moorgate-street, E.C., the 8th day of January, 1869.

**SOUTH CARN BREA MINES.**—Notice is hereby given, that a MEETING will be HELD at Tabb's Hotel, Redruth, on FRIDAY, the 22d inst., at One o'clock P.M., for the following purposes:—

The allotment of the shares. The making arrangements for the transfer of the mine and machinery, in accordance with the terms of the prospectus. The election of a committee of management and agents. The providing for the immediate and efficient working of the mine, and for the general business of the undertaking. R. H. PIKE AND SON, Camborne, January 12, 1869.

#### SOUTH MERLLYN MINE COMPANY.

Mr. E. J. BARTLETT will be happy to forward copies of reports relative to this mine on receipt of a stamped directed envelope. All particulars can be obtained by addressing him at his offices, 30, Great St. Helen's, London, E.C.

\* \* A few shares for disposal at present low prices.

**CWM DWYFOR (NORTH WALES) COPPER AND SILVER-LEAD MINES COMPANY (LIMITED).** INCORPORATED UNDER THE COMPANIES ACTS, 1862 AND 1867.

Capital £12,500, in 12,500 shares of £1 each, Fully paid-up on allotment.

BANKERS, METROPOLITAN BANK (LIMITED), LONDON. SECRETARY—Mr. G. CHAMBERS.

OFFICES, ST. CLEMENT'S HOUSE, ST. CLEMENT'S LANE, LONDON, E.C.

Applications for shares in this remarkable mine, for prospectuses, and forms, and notices of the mine, its geological and mineral character, and extraordinary physical advantages, may be addressed to the secretary, at the offices of the company, where also specimens of the ores can be seen.

#### THE GREAT NORTHERN MANGANESE COMPANY (LIMITED).

NEAR BALA, MERIONETHSHIRE, NORTH WALES.

Capital £15,000, in 3000 shares of £5 each.

DIRECTORS, RICHARD ROBERTS, Esq., Bala, Director of the Bala Banking Company. Sir EUSTACE FITZMAURICE PIERS, Bart., Manchester. H. SOUTHAM, Esq., Merchant, Manchester and Bala.

BANKERS, THE BALA BANKING COMPANY (LIMITED), BALA.

SOLICITOR, ALFRED ORRELL WALMSLEY, Esq., Brown-street, Manchester. AUDITOR, G. NELSON, Esq., Accountant, Manchester.

AGENT AND SECRETARY AT MANCHESTER—MR. J. K. WILLIAMS.

CHIEF OFFICES,—12, PARSONAGE, MANCHESTER.

The great success of the above undertaking has induced the directors to offer to the public the remaining shares at par.

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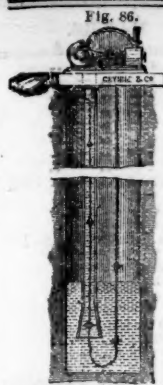


Fig. 86. Gwynne & Co's Improved Plunger Hand Pump.

A very neat and extremely compact arrangement: will work for years without getting out of order. These pumps are peculiarly adapted for mines, for which great numbers have been supplied in situations where no other pump could be applied for want of space. They are equally adapted for use as feed-pumps, by driving them with strap from a rigger in place of the fly-wheel.

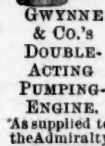


Fig. 139. Gwynne & Co's Double-Acting Pumping Engine.

Gwynne & Co's Improved Chain-Pump, Worked direct by Steam-Engine.

These pumps work without valves or der construct-packing, and raise a considerable quantity barrel and plis- of water. They will tonareof gun- lift sand, mud, or metal, and the grit without choking, whole very and require only very strong and inexpensive repairs. compact.

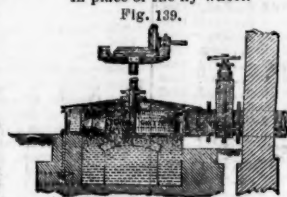


Fig. 138. Gwynne & Co's Improved Turbine Water-Wheel.

Compact, easy to erect, economical, simple, and perfectly adapted to all situations. Made of every power from 1 to 300 horse. These turbines are adapted for every class of work. Prices on receipt of particulars.



Fig. 40. Gwynne & Co's Patent Combined Steam-Pump, As Applied to Railway Stations. The vertical boiler supplies the engine with steam, the pump discharging the water lifted from the well into the tank above, whence it may be drawn as occasion requires, for feeding locomotives, washing the carriages, as a fire-engine, &c. Estimates given.



Fig. 142. Gwynne & Co's Improved Portable Steam-Engine. Light, simple in construction, durable, and economical, and very superior to "agricultural" engines. From 1/2 to 30 horse power.



Fig. 37. Gwynne & Co's Patented Wind-Power Pumping Machinery. Designed for Drains and Irrigation Purposes.

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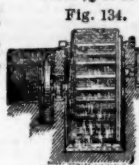


Fig. 134. Gwynne & Co's Patent Water Power Pumping Machinery. Extremely useful wherever water-power is available. The centrifugal pump is worked by gear from the water-wheel. Suitable for supplying country mansions with water. No expense when once fitted. Made of all powers.

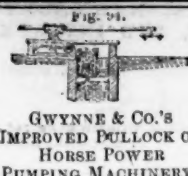


Fig. 39. Gwynne & Co's Improved Pullock or Horse Power Pumping Machinery.

For situations where steam, water, or wind power are not available. Portable, easy to erect, and not liable to get out of order. From 1 to 6 horse power.



Fig. 22. Gwynne & Co's Improved Horizontal High-Pressure Steam-Engine. With or without expansion gear, for economical working. From 4 to 100 h. p.



Fig. 140. Gwynne & Co's Improved Vertical Steam-Engine. Occupies little space, compact, safe, and easy to work. Made from the very best selected materials. Of all powers from 2 to 20 horse.

Worked direct by steam engine at the mouth of the well. This arrangement is invaluable in situations where, from peculiar circumstances, the centrifugal pump is inapplicable.



Fig. 146. Gwynne & Co's Improved Deep Well Pump. Worked direct by steam engine at the mouth of the well. This arrangement is invaluable in situations where, from peculiar circumstances, the centrifugal pump is inapplicable.

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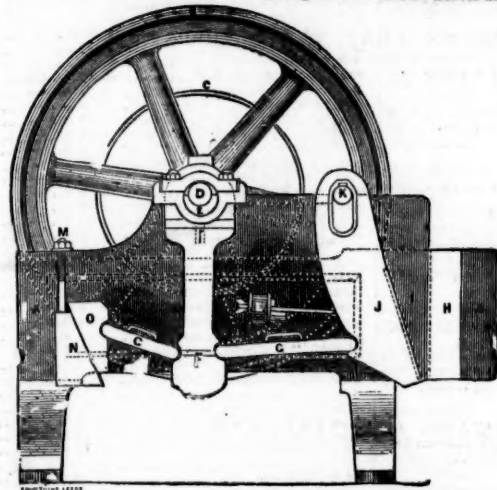
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**BLAKE'S PATENT STONE BREAKER,**

In Chancery.

**BLAKE v. ARCHER, NOVEMBER 12, 1867.**

His Honour the Vice-Chancellor WOOD having found a VERDICT in FAVOUR of the PLAINTIFFS in the above Cause, establishing the VALIDITY of BLAKE'S PATENT, and made a DECREE for an INJUNCTION to RESTRAIN the DEFENDANTS, Messrs. THOMAS ARCHER and SON, of Dunston Engine-Works, near Gateshead-on-Tyne, from INFRINGING such PATENT, and ordering them to pay to the Plaintiffs the costs of the Suit.

ALL PERSONS are hereby CAUTIONED against MANUFACTURING, SELLING, or USING any STONE BREAKERS similar to BLAKE'S, which have not been manufactured by the Plaintiffs. Application will forthwith be made to the Court of Chancery for INJUNCTIONS AGAINST ALL PERSONS who may be found INFRINGING BLAKE'S PATENT after this notice.

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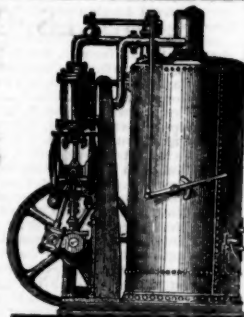
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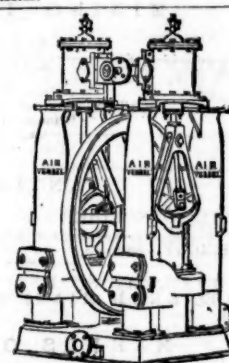
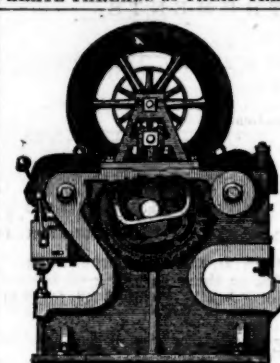
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## THE MINING SHARE LIST.

## BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500 Alderley Edge, c. Cheshire	10 0 0	—	—	—	10 1 8	0 10 0	July 1868
200 Botallack, t. c. St. Just	1 11 0	—	—	—	491 5 0	2 10 0	Jan. 1868
4000 Brookwood, c. Buckfastleigh	12 0 0	—	—	—	0 12 6	0 3 6	Aug. 1868
1000 Broadford, t. Cardigan	4 0 0	—	—	—	0 12 0	0 10 0	Jan. 1869
5004 Breich Conals, s. c. Cardigan	2 10 0	1 1/2	—	—	0 5 0	0 5 0	June 1868
6000 Cashwell, t. Cumberland	15 6 7	22	—	—	0 3 0	0 1 6	Aug. 1868
916 Cargill, s. t. Newlyn	19 14 9	74	—	13 14	15 5 0	0 10 0	Oct. 1868
1280 Chanticleer, t. i.	0 7 8	—	—	—	0 1 0	0 0 6	Nov. 1868
3450 Cook's Kitchen, c. Illogan	25 0 0	—	—	—	1 17 0	0 5 0	Jan. 1869
509 Cregebrasse and Penkelt, t. i.	7 10 0	—	—	—	2 5 0	0 5 0	April 1868
867 Dwm Erlyn, t. Cardiganshire	60 0 0	—	—	—	29 13 0	0 10 0	Jan. 1869
128 Dwymswith, t. Cardiganshire	300 0 0	—	—	—	363 10 0	2 0 0	Aug. 1868
280 Derwent Mines, s. t. Durham	1 0 0	350	—	—	377 0 0	2 10 0	July 1868
1024 Devon Gt. Consols, c. Tavistock	1 0 0	350	—	—	1130 0 0	5 0 0	Nov. 1868
456 Ding Dong, t. Gulgalt	49 14 6	—	—	—	0 10 0	0 10 0	Sept. 1867
358 Dolcoath, c. t. Camborne	128 17 6	490	—	—	864 10 0	7 0 0	Dec. 1868
6144 East Caradon, c. St. Cleer	2 14 6	8 1/2	0 1/4	10 1/4	14 11 6	0 2 0	July 1867
300 East Darren, t. Cardiganshire	32 0 0	—	—	—	102 10 0	3 0 0	Nov. 1868
128 East Pool, t. c. Pool, Illogan	24 5 0	—	—	—	482 10 0	5 0 0	Jan. 1869
1906 East Wheel Lovell, t. Wendron	3 9 0	—	—	—	4 1 6	0 5 0	May 1868
2806 Foxdale, t. Isle of Man	3 18 6	—	—	—	72 0 0	0 10 0	Sept. 1868
2500 Frank Mills, t. Chiverton	3 18 6	—	—	—	5 5 0	0 5 0	Feb. 1866
15000 Great Laxey, t. Isle of Man	4 0 0	20	19 20	—	0 3 0	0 3 0	Jan. 1869
5908 Great Wheel Vor, t. c. Helston	40 0 0	11	10 11	—	9 15 0	0 10 0	Dec. 1868
1024 Herodfoot, t. near Liskeard	8 10 0	44	42 44	—	48 0 0	1 10 0	Oct. 1868
165 Levant, c. t. St. Just	10 8 1	—	—	—	1095 0 0	2 0 0	July 1868
400 Lisburne, t. Cardiganshire	18 15 0	—	—	—	510 10 0	1 10 0	Nov. 1868
3000 Maes-y-Safn, t. Flint	20 0 0	—	—	—	4 0 0	0 5 0	Oct. 1868
3000 Marke Valley, c. Cardigan	1 0 0	9	8 1/2	9	4 19 0	0 5 0	Jan. 1869
3000 Minera Boundary, t. Wrexham	1 0 0	—	—	—	0 13 0	0 3 0	Mar. 1868
3000 Minera Mining Co., t. Wrexham	25 0 0	—	—	—	243 13 6	4 0 0	Nov. 1868
2000 Mining Co. of Ireland, c. t. i.	7 0 0	9 1/2	11 11 1/2	—	—	9 p.c.	July 1868
40000 Mynydd Iron Ore	3 5 0	—	—	—	0 8 6	0 2 0	Mar. 1868
300 Parya Mines, c. Anglesey	50 0 0	—	—	—	162 10 0	2 10 0	Aug. 1868
12800 Prince of Wales, t. Calstock	0 12 6	24s.	23s. 25s.	—	0 8 6	0 10 0	Nov. 1868
1120 Providence, t. Uny Lelant	10 6 7	35	34 36	—	86 12 0	1 0 0	Dec. 1868
512 South Caradon, c. St. Cleer	1 5 0	860	—	—	602 10 0	5 0 0	Nov. 1868
287 South Darren, t. Cardigan	24 10 0	—	—	—	1 0 0	0 1 6	Aug. 1868
400 So. H. Frances, c. Illogan	18 18 9	15	14 15	—	274 13 6	1 0 0	Mar. 1868
508 Summer Hill, t. Mold	3 18 6	—	—	—	2 5 6	0 5 0	Feb. 1868
2000 Tincroft, c. t. Pool, Illogan	9 0 0	18	17 18	—	20 1 0	0 5 0	Nov. 1868
2000 Trumpton Cons., t. Helston	11 10 0	—	—	—	13 10 0	0 10 0	Oct. 1868
3000 W. Chiverton, t. Perranzabuloe	10 0 0	60	59 61	—	31 7 6	2 0 0	Nov. 1868
4000 West Godolphin, t. c. Breage	0 1 0	—	—	—	0 2 0	0 2 0	Dec. 1867
500 W. Wheel Seton, c. Camborne	47 0 0	190	190 200	—	616 0 0	6 0 0	Dec. 1868
512 Wheel Basset, c. Illogan	5 2 6	65	—	—	1 1 6	0 1 0	June 1868
1024 Wheel Jane, s. t. Ken	20 0 0	—	—	—	800 10 0	8 0 0	Nov. 1866
4296 Wheel Killy, t. St. Agnes	5 4 6	4 1/2	4 1/2	—	21 0 0	2 0 0	Nov. 1868
1024 Wheel Mary Ann, t. Menhenlot	8 0 0	21	20 21	—	66 17 6	0 17 6	Dec. 1868
80 Wheel Owies, t. St. Just	70 0 0	—	—	—	350 13 0	7 10 0	Feb. 1868
396 Wheel Seton, t. c. Camborne	58 10 0	70	66 68	—	254 15 0	2 0 0	Feb. 1868
3000 Whitehead Lead, Clitheroe	0 5 0	—	—	—	1 0 0	0 10 0	Dec. 1867
17000 Wicklow, c. t. Wicklow	2 10 0	11 1/2	—	—	49 1 0	0 5 0	Oct. 1868

## FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
35000 Alamillos, t. Spain	2 0 0	1 1/2	1 1/2	—	0 4 6	0 2 0	Sept. 1868
20000 Australian, c. South Australia	7 7 6	—	—	—	0 1 6	0 6 0	Aug. 1868
15000 Cape Copper Mining	7 0 0	—	13 13 1/2	—	8 17 6	0 15 0	Nov. 1868
30000 Central American Association	1 10 0	—	—	—	—	—	—
76162 Don Pedro North del Rey	0 14 0	—	4 1/4	—	1 0 8	0 3 6	Nov. 1868
70000 English and Australian, c. i.	2 0 0	—	—	—	1 11 10	0 2 6	Sept. 1868
25000 Fortuna, t. Spain	2 0 0	—	1 1/2	2	23 10 0	0 15 0	June 1867
10000 Gonnese, t. i.	5 0 0	—	—	—	10 percent.	—	Aug. 1868
60000 Kapunda Mining Co., Australia	1 0 0	—	—	—	0 1 0	0 6 0	Nov. 1868
15000 Linares, t. Spain	3 0 0	3	2 1/2	3	11 15 0	0 3 4	Sept. 1868
50000 Panulillo, c. Chili	8 0 0	1 1/4	5 1	—	10 percent.	—	Yearly
6000 Peel River Land and Mineral	100 0 0	—	—	—	—	—	—
10000 Pontbaid, s. t. France	30 0 0	12	10 12	—	5 6 2	0 19 7	Dec. 1868
100000 Port Phillip, c. Clunes	1 0 0	13	1 1/2	2	1 0 0	0 1 6	Jan. 1869
120000 Scottish Australian Min. Co. t.	1 0 0	1 1/2	1 1/2	—	10 percent.	—	Nov. 1868
11000 St. John del Rey, Brazil	15 0 0	15 1/2	15 1/2	—	81 10 0	4 5 0	Dec. 1867
4000 Swedish Sulphur Ore	2 10 0	—	—	—	7 1/2 percent.	—	Dec. 1868
13500 Vancouver Coal Mining	6 0 0	9	8 9	—	2 3 6	0 12 0	Nov. 1868
50000 Victoria (London) £1 pd., £20000 12s. 6d. pd.]	0 0 0	—	—	—	0 9 7	0 7 0	July 1868
40000 West Canada Mining Co.	1 0 0	—	—	—	0 19 6	0 2 6	May 1866

## NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Total Cash.
60000	Anglo-Argentine, s. Argentine Republic*	1 0 0	1	..	..
00000	Anglo-Brazilian, g†	0 10 0	..	%.. 10s. 11s.	Nov. 1868
12500	Anglo-Italian, g†	0 10 0	..	%.. ¾	Jan. 1868
20000	Australian United, g	1 0 0	—	..	Mar. 1869
2464	Burra Burra, c. South Australia†	5 0 0	—	..	..
20000	Capula, s. Mexico†	1 17	..	..	May 1868
00000	Chontales, g, s. Nicaragua†	5 0 0	2%	17% 2%	Jan. 1868
12000	Cobre Copper Company, c. Chile*	45 10 0	—	..	Jan. 1868
10000	Copac Mining Company, Chile*	16 10 0	—	..	..
10000	Copapo Smelting, Chile†	10 0 0	—	..	April 1866
300	Copper Miners' Co. of South Australia* [150 £100 pd.]	150 £70 pd.]	..	..	Nov. 1866
15000	El Chico Silver Mining and Reduction Company*	5 0 0	—	..	Nov. 1866
00000	Fortune Copper Mining Co. of Western Australia	2 0 0	—	..	Fully pd.
60000	Frontino and Bolivia, g, New Granada†	1 17 6	..	½.. 8s. 10s.	May 1868
50000	General Brazilian*	0 2 0	..	½.. 9s. 11s.	..
80000	Great Northern, c. South Australia†	1 11 6	—	..	Sept. 1862
80000	Javali, g, Nicaragua	2 0 0	—	..	Jan. 1869
7927	Lustanlian (Portugal)†	2 10 0	—	..	Dec. 1866
83640	Mariquita, g, s. New Granada	1 0 0	—	..	Feb. 1868
12500	Nerbudda Coal and Iron, India†	1 0 0	—	..	Dec. 1867
00000	New Quebrada, c. Venezuela†	4 4 0	—	..	..
15000	Otea, c. New Zealand*	2 0 0	—	..	Fully pd.
00000	Pestarena United, g, Italy†	2 17 6	..	%.. 1¼ 1¾	..
10178	Rhenish Consolidated, [60000 £2 pd., 4178 £2 10s. pd.]	—	..	..	May 1866
00000	Rossa Grande, g, Brazil†	0 14 0	..	1½.. 1¾ 1¾	June 1867
15000	San Pedro del Monte, s. Mexico*	4 0 0	—	..	Sept. 1866
10000	San Roque, l. Spain	5 0 0	—	..	Fully pd.
00000	Sao Vicente, Brazil†	1 0 0	—	..	Oct. 1868
00000	Taquaril, g, Brazil*	0 7 6	..	%.. 13s. 15s.	Oct. 1868
43174	United Mexican, s. Mexico†*	28 5 2	2	.. 1¾ 2	May 1868
00000	Val Antigua, g, Italy	1 0 0	—	..	Aug. 1868
45000	Val Sassan, s. c. l. Italy†	8 0 0	—	..	Fully pd.
00000	Victor Emanuel, l. Italy*	1 0 0	—	..	Fully pd.
20000	Washoe, g, Nevada†	5 0 0	—	..	Fully pd.
90000	Worthing, c. South Australia*	1 0 0	..	%.. 1¼ ¾	Fully pd.
75000	Yorke Peninsula, South Australia	1 0 0	..	%.. 1¼ ¾	Fully pd.
00000	Yudanamutana, c. South Australia††	3 0 0	2½	.. 2 2½	Fully pd.